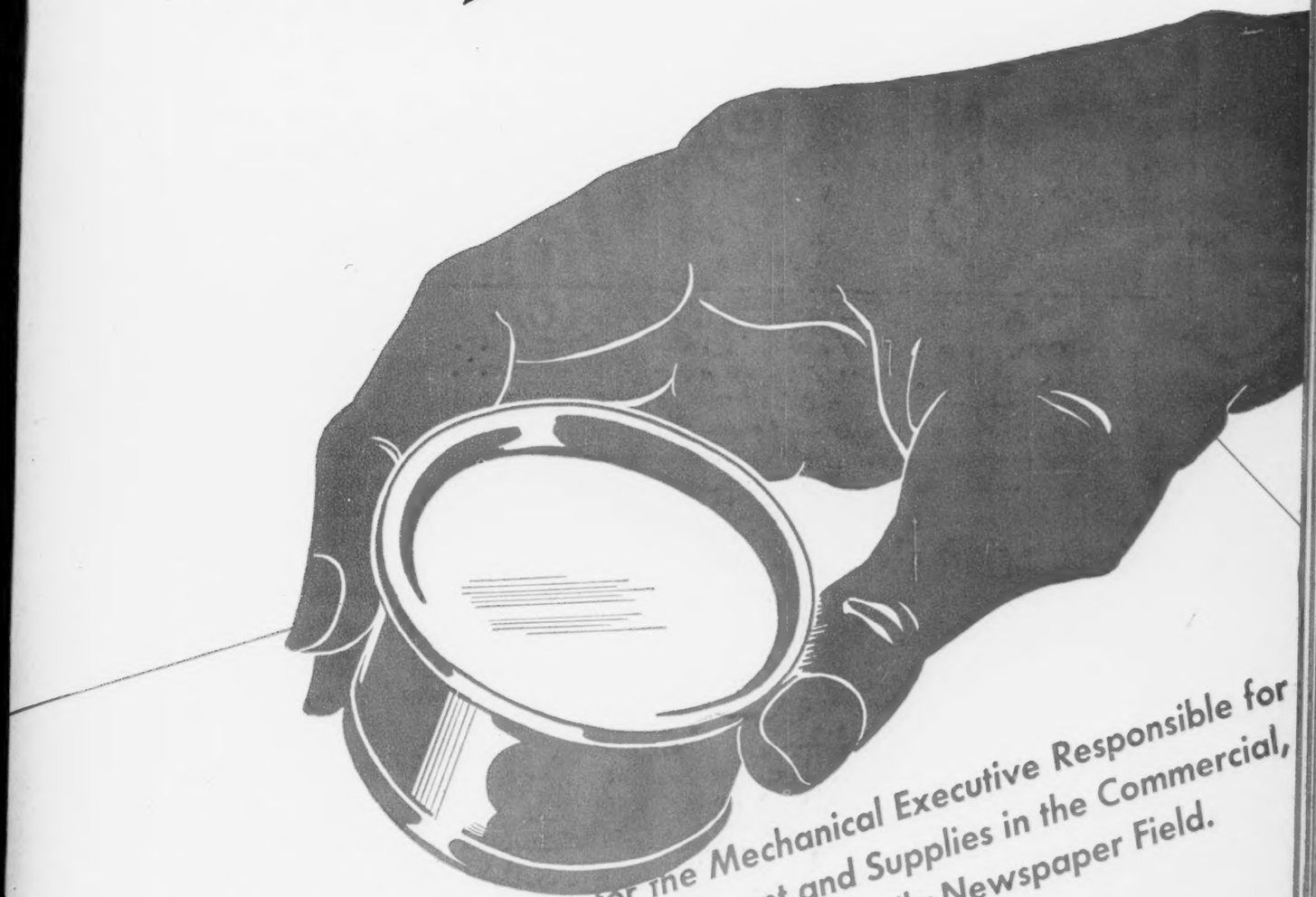
PRINTING EQUIPMENT *Engineer*



A Technical Publication for the Mechanical Executive Responsible for Printing Production, Equipment and Supplies in the Commercial, Magazine, Private Plant and Daily Newspaper Field.

APRIL, 1943

School and Press . . . . . makers of America

Plymouth Colony was scarcely settled in 1620 before children met in the "Dame" school using birchbark and charcoal to copy A B C's traced in sand upon the floor. It was the dawn of education, the infancy of a tremendous readership destined to influence the world. Later, as little Red Schoolhouses dotted the landscape, it became clear that the heart of America could be swayed by the printed page. And so the editor-printer became a Nation-builder, meeting the needs of a growing country, and printing in its various forms became a vehicle of progress and salesmanship.

Today's printing needs are more complex than ever. But the printer, alive to conditions and faithful to his tradition of whole-hearted service, has stepped promptly into the picture offering the power of the printed message as a means of creating group interest and assuring united action. Such help will solve many of today's problems.

NOW AVAILABLE. Complete and comprehensive Guide Book of Essential Wartime Printing and Lithography. 64 pages (8½" x 11") of detailed description and information on every government public relations problem which can be aided by printed promotion. We shall be glad to obtain a copy for you . . . or write direct to Graphic Arts Victory Committee, 17 East 42nd St., New York City.

HARRIS · SEYBOLD · POTTER · COMPANY

HARRIS DIVISION
CLEVELAND, OHIO
MANUFACTURERS OF OFFSET LITHOGRAPHIC • LETTERPRESS AND GRAVURE PRINTING MACHINERY • • • • • •

SEYBOLD DIVISION
DAYTON, OHIO
MANUFACTURERS OF PAPER CUTTERS AND TRIMMERS • KNIFE GRINDERS • DIE PRESSES • WRIGHT DRILLS • MORRISON STITCHERS

Effective Typography

TYPOGRAPHY can be dramatic and effective without making hand-drawn or "blown-up" type lines or special decorative borders which require the use of war-needed metals. The good printer makes the best use of materials at hand. All that is required for good results is a little thought and more of just such ingenuity as he uses with other materials.

He need look no farther than his own composing room for these materials. Big type, colorful and expressive scripts, interesting borders and ornaments, plus rules, supply all that is needed.

The Ludlow-equipped printer can produce typefaces in full range of sizes from 4 to 240 pt. without limitation—roman, italic or script—borders, ornaments and decorative materials. He can produce job and display composition economically and well, and without a worry in the world about supply or restrictions, as the only metal used is that which actually goes into the printing form, and even this may be used over and over again.

Scripts at an angle as a distinguishing feature? Sure, it's easily done, and in slug units that stay in place and are easy to make up and lock up. Big display lines? Yes, in unlimited supply. Border units for all-over designs to save platemaking? Set one line and repeat-cast a thousand slugs.

Ludlow-equipped printers, large and small, are serving their country's wartime printing needs economically and efficiently. In every way possible, we are assisting these printers to keep their Ludlow equipments operating properly.

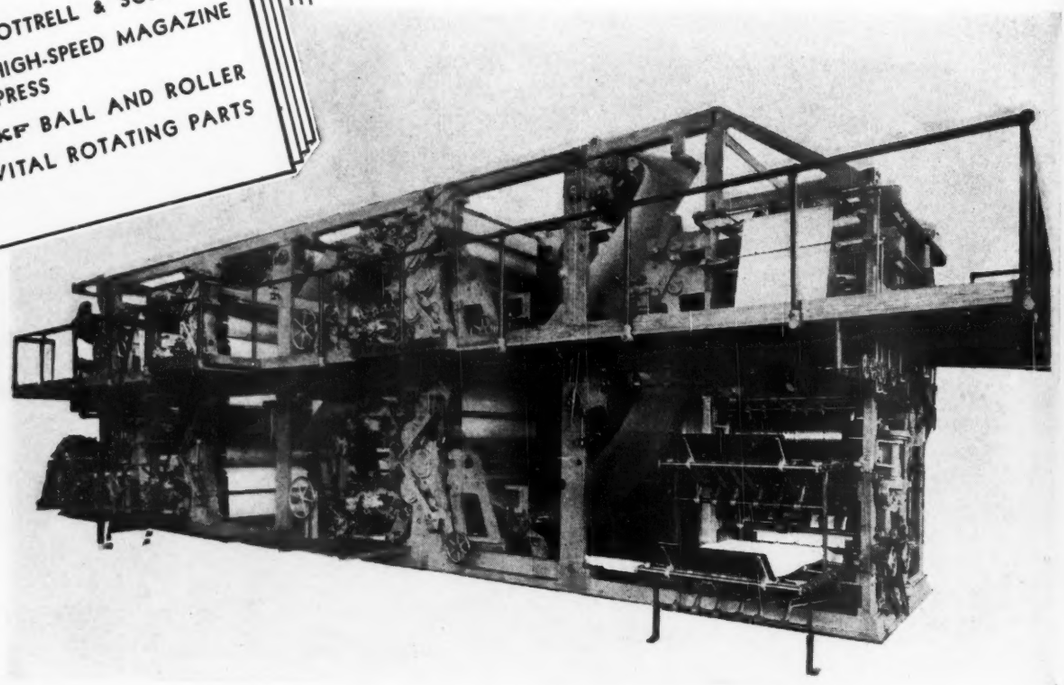
While our manufacturing facilities are being devoted almost wholly to war production, we may be able to help you. If you have composition problems, please feel quite free to ask us for suggestions.

Ludlow Typograph Company . . . 2032 Clybourn Avenue, Chicago, Ill.

Set in Ludlow Bodoni Modern and Coronet Bold, and Elrod-cast rules

APPLICATION

Mfr. C. B. COTTRELL & SONS CO.
Application HIGH-SPEED MAGAZINE PRESS
Bearings SKF BALL AND ROLLER
Locations VITAL ROTATING PARTS



500 SKF Bearings

ASSURE HIGH PRESS SPEEDS

If bearing performance means better press performance, then this 200,000 pound High Speed Magazine Press meets the most exacting demands. About 500 SKF Bearings of various types keep shafts rolling smoothly as 64 pages are printed in two colors on two webs or 32 pages in four colors on a single web. Waste resulting from vibration backlash and cylinder jump is curtailed. Color is applied uniformly. There's close register. And there's no distortion or filling up in the reproduction of the finest halftone dots. In printing, these are the things that mean PRODUCTION.

5271

SKF INDUSTRIES, INC., FRONT ST. & ERIE AVE., PHILA., PA.

ARMY E NAVY

SKF
BALL AND ROLLER
BEARINGS

OIL AND INK
hold no terrors for these
SYNTHETIC RUBBER BLANKETS
made with CHEMIGUM

TODAY, natural rubber is doing war-duty to the exclusion of all else.

But long ago Goodyear laboratories started development of the synthetic rubber known as Chemigum.

And, for the past 4 years, Chemigum has been giving successful service in newspaper blankets and other printing supplies.

In fact, Chemigum has proved itself *superior* to natural rubber in oil-and-ink resistance as well as durability.

There are now available three types of Goodyear Chemigum Blankets. They are: The Goodyear Aristocrat Top Blanket, the Goodyear Monarch Top Sheet and the Goodyear Premier Underblanket. They can be used in any combination to give you a two- or three-piece packing for best results on any press.

These Goodyear Chemigum Blankets hold their gauge and are non-swelling. They do not walk from centers, nor retain leader marks—and they have the resiliency required for sharp, clear impressions.

Dress your press with Goodyear Chemigum Blankets —and see for yourself how outstanding their performance really is.

Distributed by

J. THOMAS McHUGH COMPANY
31 East Georgia Street, Indianapolis, Ind.
500 Fifth Avenue, New York, N. Y.

GEORGE RUSSELL REED, JR.
431 Clay Street, San Francisco, California

Chemigum, Aristocrat, Monarch, Premier—T.M.'s The Goodyear Tire & Rubber Company

GOODYEAR
THE GREATEST NAME IN RUBBER

PATTERN in PAPER

War necessities outweigh all other considerations, and Champion's first job is to provide pulp and paper for the manufacture of products needed in winning the war. Yet paper is essential also to civilian industry and business, whose survival is vital to our future economy. Business must plan now for postwar activities, for Government says private enterprise is expected to supply jobs for all who want to work. The paper industry cooperates fully with government agencies in conserving critical materials and services. Within the limitations established, Champion strives to meet all demands that war is making upon its facilities; and in addition, supplies all it can to business to help maintain the sound American economy which the world finds so necessary.

THE CHAMPION PAPER AND FIBRE CO., Hamilton, Ohio

MILLS AT HAMILTON, OHIO . . . CANTON, N. C. . . . HOUSTON, TEXAS

Manufacturers of Advertisers' and Publishers' Coated and Uncoated Papers, Cardboards, Bonds, Envelope and Tablet Writing . . . 2,000,000 Pounds a Day

DISTRICT SALES OFFICES

NEW YORK · CHICAGO · PHILADELPHIA · CLEVELAND · BOSTON · ST. LOUIS · CINCINNATI · ATLANTA

TECHNICAL BOOKS

- **STANDARD BOOK ON ESTIMATING for PRINTERS —By Fred W. Hoch.** Revised 1941 edition. This book is a primer for students and a reference for printers and estimators. Every printing plant should have a copy. Author explains all operations in commercial printing plant and shows production time allowance for each in hours and decimal hours. Size, 6 in. by 9¼ in., 268 pages, $3.75 per copy, cash with order.
- **PRINTING INKS** — Their Chemistry and Technology **—By Carleton Ellis.** Bound in cloth, 6 in. by 9½ in., 560 pages, well illustrated. For printing executives, pressmen, photo-engravers, platemakers, ink manufacturers, chemists, paper-makers. Author stays close to printing plant. The solving of new production problems brought about by technological improvements, both in equipment and inks, created the urgent need for this book. Price $7, cash with order.
- **THE PRACTICE OF PRESSWORK—By Craig T R. Spicher.** We offer copies to our readers, at the special price of $4.00 per copy, cash with order. No printer should be without a copy (9000 copies printed).
- **LITHOGRAPHER'S MANUAL—Compiled by Walter E. Soderstrom.** Second revised edition. Technical information from copy to finished job. Nationally known technical men contributed the bulk of practical camera, platemaking and presswork information. Size 8½ in. by 11¼ in. Bound in red cloth, gold stamped. Many of the 368 pages are illustrated. Price $5 per copy, cash with order.
- **PHOTOGRAVURE—By H. Mills Cartwright.** Covers all of photogravure's basic principles in concise and readable language. Rotogravure receives minor discussion but this is generally considered best textbook on photogravure process. Contains 202 pages, 34 illustrations, maroon cloth, size 6¼ in. by 9¼ in., $3.50 per copy, cash with order.
- **MANUAL OF STEREOTYPING — By Joseph Goggin.** This 256-page book conveys technical information and manipulating procedure. Written by a practical stereotyper. Price $5.00, cash with order.
- **PRESSROOM PROBLEMS AND ANSWERS — By Fred W. Hoch.** Might be considered a miniature encyclopedia since it contains answers to 334 pressroom problems which have been answered by Mr. Hoch. Written in language of journeyman pressman. Pressmen, production men, paper and ink manufacturers, electrotypers and photo-engravers will find this book of high utility when pressroom problems arise in which tendency is to lay blame on furnished materials used in pressroom production. Size, 6 in. by 9½ in., 258 pages, gold stamped blue cloth. Price, $3 per copy, cash with order.
- **HOW TO ADJUST WORK-UPS — By Wm. H. Lichter and Geo. F. Smalley.** Booklet consists of 24 pages in which are analyzed and remedies are given for prevention and/or elimination of work-ups. Material written as result of actual plant experience. Size, 5¼ in. by 7¼ in. Price, $1 per copy, cash with order.
- **HANDBOOK FOR PRESSMEN — By Fred W. Hoch.** Book written by authority on all phases of flat-bed letterpress production for the practical pressman. Contains 248 pages, 26 illustrations and 24 charts, $3 per copy, cash with order.

• *Send All Orders With Remittance to*

PRINTING EQUIPMENT Engineer

1276 W. Third Street

Cleveland, Ohio

Printing Equipment *Engineer*

LEADING ARTICLES, APRIL 1943

Random Notes 11

Production Manager H. G. Bradley discusses in very human manner how some production problems are handled in Lilly plant.

Skid for Unloading Rolls . . . 14

Mech. Supt. A. E. Rosene describes device for getting decked rolls safely and quickly to the floor.

Prevue Meeting—GAVC *Guide* 16

C. V. Morris bubbles over with enthusiasm about Government officials' praise of Graphic Arts Victory Committee's manual for helping printers.

L-226 from Dealer's Standpoint 18

Chief David B. Fell of Printing and Publishing Division's Machinery Section tells why certain provisions are contained in the order.

Scoring Device for Marking Elrod Rule 19

Plant Supt. Homer Livingston provides a means for marking rule so compositor can distinguish "right side up" easily.

Government Printing 21

The Public Printer explains perplexing things to printers doing Government printing.

WPB News and Notes 24

Craftsmanship—Its Potentialities 28

Composing Room Supt. C. Frank Mann discusses qualities that make alert executive.

Printing Patents Report 31

Invention, Inc., reports some interesting developments this month.

Equipment and Supplies . . . 32

The Foreman—His Place in the Safety Program 34

Abstract of address by H. W. Heinrich before National Safety Council contains valuable information to plant executive.

Executive Paragraphs 40

News items from here and there about people whom you may know.

PRINTING EQUIPMENT Engineer, a monthly publication, Volume 66, No. 1. Published at 1276 West Third St., Cleveland, Ohio, April, 1943. ☆ MacD. Sinclair, Editor. Adam Henri Reiser, Associate Editor. John E. Cobb and J. Homer Winkler, Contributing Editors. ☆ Don Will, Publisher. Western Representative E. P. Bloomster, 232 East Erie St., Chicago, Ill., phone SUperior 2444.

Copyright 1943 by The Willcox Pub. Co.

☆ Subscription price per year, $3.50 in advance in U. S. A. Single copy current issues, 35c. Feature issues, $1.00. December Equipment and Supplies Catalog Issue, $1.00. Subscriptions in foreign countries, $4.50 in advance, U. S. currency. ☆ Printed in U. S. A.

MEMBER CONTROLLED CCA CIRCULATION AUDIT

something deeper than victory

Behind victory stands the security of our children . . . home . . . freedom as we know it. All are motivating forces that insure victory in this global struggle.

These same concepts urge the American War Worker to give his all that those on fighting fronts may once again return to their way of life.

It is so at GOSS

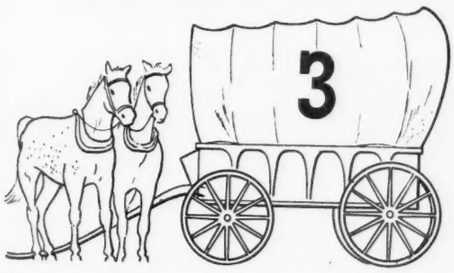
★

THE GOSS PRINTING PRESS COMPANY

CHICAGO, ILLINOIS, U. S. A.

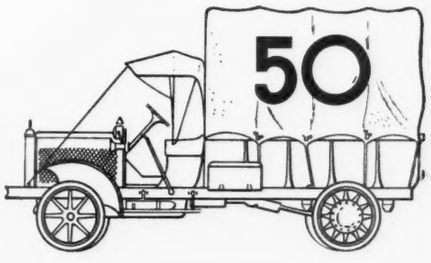
GOSS

NEW YORK SAN FRANCISCO LONDON, ENGLAND



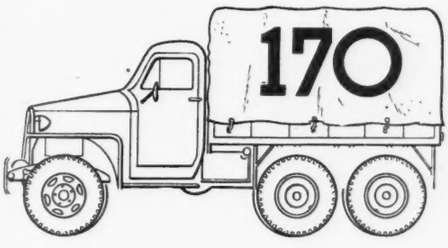
TRUCKLOADS
of AMMUNITION

. . . a minute, could be shot by a Civil War division of 1500 infantrymen.



TRUCKLOADS
of AMMUNITION

. . . was the fire power, per minute, of a division in World War I.



TRUCKLOADS
of AMMUNITION

. . . are shot in a minute of combat by an armored division today . . . 5000 pounds of metal in ⅓ of a second . . . to say nothing of the great mass of metal used in the mechanized equipment itself.

IT TAKES a half-ton of scrap to make every ton of armament. Industry's duty is to find and turn over 140,000 tons of scrap metal daily. Without that scrap there may be only half enough ships, half enough tanks, half enough guns and half enough progress toward victory.

In no other industry is scrap disposal facilitated with incentives like those of the Miller Wartime Scrap Allowance Plan. You are invited to enlist your obsolete and "border-line" printing machinery as scrap for the war effort—and for post-war pressroom rehabilitation. Write for simple details.

MILLER PRINTING MACHINERY CO.
PITTSBURGH, PA.

American soldiers in Africa is probably only one of many causes to come which will increase the importance of pressroom schedules and step up the demand for the comprehensive kind of news which is furnished by the newspapers.

This is an added burden on mechanical superintendents who are already obliged to make the most of existing pressroom equipment. Here is a case where the ounce of prevention is many times better than the pound of cure—especially since the cure may be delayed, if indeed it is available at all.

A program of periodic check-up of equipment should pay untold dividends. It enables you to detect trouble before it arises when a little precaution or a simple adjustment may be the easy means of assuring uninterrupted operation.

Press manufacturers and pressroom executives together should do everything possible to *keep the presses rolling*. It's a duty we owe to the American public.

AWARDED FOR HIGH ACHIEVEMENT

ARMY E NAVY

R. HOE & CO., INC., 910 E. 138TH ST. (AT EAST RIVER) NEW YORK

SOMETIMES AS MUCH AS 10%

Monotype Closely Fitted Machine-Set Faces Can Be Used to Save Paper, Ink, Presswork, Folding, Binding, Etc.

In your search for means to offset the reduction in the quantity of paper stock you will be permitted to use during the coming year, do not overlook the advantages offered by the space-saving qualities of Monotype machine-set composition.

The close fitting of Monotype roman and italic machine-set faces presents opportunities for the selection of text types which will result in space-savings, and at the same time achieve a greater degree of readability and an improvement in typographic values.

This saving in type space can be translated into savings in paper used and thus may easily compensate for the 10 per cent reduction in paper purchases which is required by Government order, and *will also induce savings in presswork, folding, binding and other mechanical operations* required to be performed.

Printers everywhere can employ these advantages, either through the use of their own Monotype machines or by using the facilities of Monotype-equipped trade composition houses.

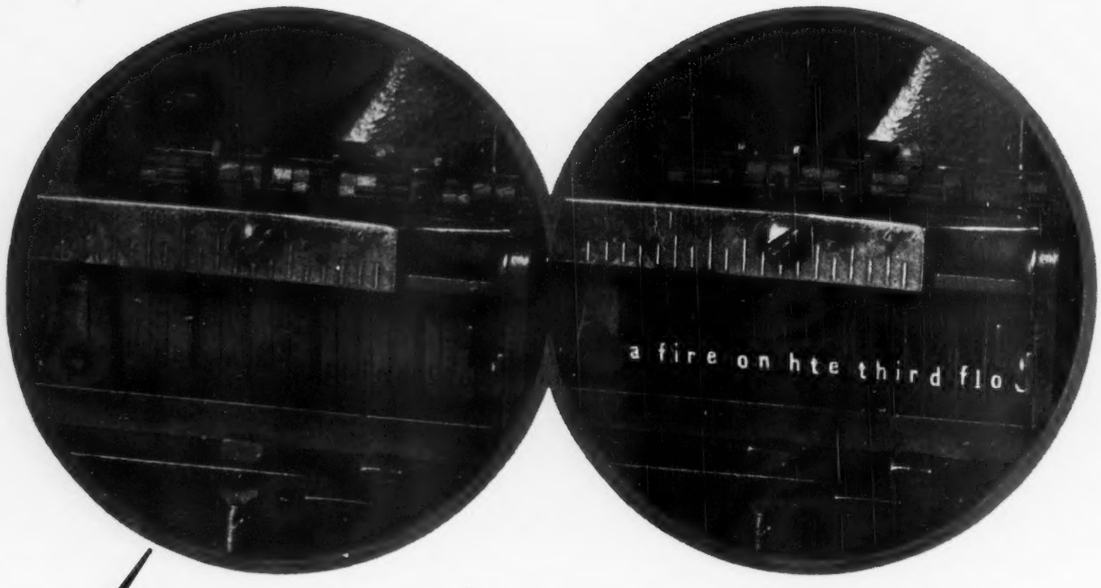
Save Paper by Using Space-Saving Monotype Machine Composition!

LANSTON MONOTYPE MACHINE COMPANY

MONOTYPE BUILDING, TWENTY-FOURTH AT LOCUST STREET, PHILADELPHIA, PENNA.

Composed in Monotype Squareface, Stymie and Stylescript

IN DAYS LIKE THESE



why work with antiquated equipment ?

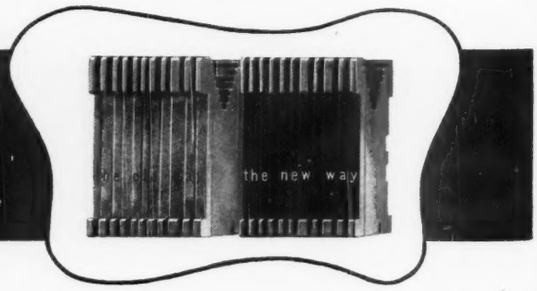
With new typesetting machines unavailable, or only through high priority ratings, it is doubly important to get peak efficiency out of your present equipment. You can get more production from your line composing machines by installing Black and White Matrix Contrast Service.

Black and White contrast reference marks eliminate about one-third of all errors in original composition. This large saving in errors means there are fewer correction lines to set, more O.K. takes ready for page forms and more machine time available for original composition.

Scientific tests of the reference marks on Linotype and Intertype matrices, made by means of the Luckiesh-Moss Visibility Meter, prove that Black and White processed reference marks have a visibility factor equivalent to that of 9½-point type as compared with 3-point for used non-processed references marks. This high relative visibility of contrast reference marks definitely relieves eyestrain and lessens fatigue.

BLACK & WHITE
MATRIX CONTRAST SERVICE

MATRIX CONTRAST CORP.
SOLE LICENSEES
OF THE PERCY L. HILL MATRIX CONTRAST PATENTS NOS. 1,466,437 AND 1,796,023
EMPIRE STATE BUILDING NEW YORK
EUROPEAN AGENTS
FUNDITOR, LTD., 3, WOODBRIDGE STREET, CLERKENWELL GREEN, LONDON, E. C. 1



Satisfying the Customer

PRODUCTION Manager H. G. Bradley of the Eli Lilly & Co. printing plant, Indianapolis, in a recent address, illustrated the vagaries of printing customers and the lengths to which printers will go to try to satisfy them, especially with respect to matching colors. He told a story about a rather particular type of man who ordered a job of printing in which black and red ink were to be used. When he was asked to specify the shade of red he wanted, several specimen swatches were shown to him. He said none of them were suitable, and added: "I know what I want but none of these are it."

The printing executive told him: "I've got to know what you have in mind before I order the red ink."

The man thought it out for a little while, then said: "The red I have in mind is the same as my wife's hair. I have it—we're going to church Sunday morning. If you could arrange to sit right behind her you could tell just what the red ink will be like."

Accordingly, on Sunday morning, the printing executive appeared at the church and sat behind his customer's wife with the ink sample box on his knee, thumbing over the swatches until he found the proper red.

Random Notes about operation of an interesting private printing plant—Production force is research and standardization minded — Technical notes for helping production

By H. G. BRADLEY*

*Production Manager, Eli Lilly & Company's printing plant, Indianapolis, Ind. Abstracted notes from address delivered before Cleveland Craftsman's Club, March 1943.

IN talking about a subject which he knows intimately, H. G. Bradley, Production Manager of the Printing Department, Eli Lilly & Co., Pharmaceutical Manufacturers, Indianapolis, gave an extremely interesting technical address before the March meeting of the Cleveland Craftsman's Club. Mr. Bradley discussed production operation of the Lilly plant from which over 70,000,000 impressions were secured last year. Work produced consists of publications, booklets, circulars, labels, cardex, office forms and stationery. This is not a complete report of Mr. Bradley's address but was prepared from notes taken at random while he talked. Space does not permit printing the entire address.

At the outset, Mr. Bradley stated his firm's printing plant is under-equipped. By way of explanation he stated the firm buys $100,000 worth of printing per year in addition to the printing which is produced in its own plant. These orders range from $2000 to $20,000 per month. In operating the plant, Mr. Bradley asserted that his production force has the same problems and must meet the same deadlines as any commercial printing plant.

Composing room facilities in the Lilly plant are limited, principally to makeup and lockup, since the bulk of composition is purchased from trade typographers. All engravings and electrotypes are purchased from firms specializing in these types of work to the trade.

The greater part of the Lilly plant consists of the pressroom, die-cutting and bindery departments with facilities for handling and storing paper. The pressroom equipment is made up of letterpresses—platen and flatbed. There are 18 presses in operation, 4 of which are operated on night shift, actually making a total of 22 presses used regularly. Two of the cylinder presses are equipped with Upham attachments for printing a color from a curved plate at the same time the black form is printed (once through the press). Two No. 46 two-color presses are operated.

Research Minded

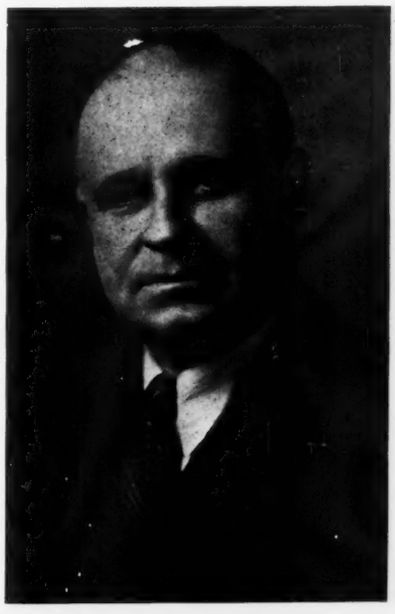
The speaker touched upon an interesting note when he stated that his firm spends close to half a million dollars per year in research for its products. Research is in the air, so to speak, and everybody in the Lilly plant is research minded. As a result, the research department is in a position to work out some printing problems. Mr. Bradley confessed, however, that his department did not always meet printing process and production problems successfully. He said: "In printing from rubber plates we are a flat tire." He added that he is now printing from synthetic plates and thinks his department will get some place.

Supplementing his remarks on research he mentioned Craig Spicher's new slogan "How do you know you know?" he said this should be added to the Craftsmen's "Share your knowledge" objective. By way of explanation he said that if a pressman can take a wrinkle out of a sheet he should also be able to put it back in the sheet again. When he can do both, then "he knows he knows".

He spoke of the necessity of securing accurate information about all details in orders received for printing from customers. At times in the past, after a job had been delivered, complaints would be made that the wrong color of ink had been used, the paper was not what it should be, and perhaps because of lack of definite instructions as to how the job should be wrapped for delivery, complaints would be received. He stated that as the result of past experiences, when an order is received now everything is assumed to be wrong and all details of the order are checked over to complete necessary information before the job is commenced. If a sample sheet of paper is supposed to be 8½ in. by 11 in., the sheet actually is measured to check the size.

Getting Uniform Product

Probably the best way to secure a uniform product in a pressroom is to delegate press preparation to one individual. In his own case, Mr. Bradley took one of the pressmen in the plant who "knew his stuff" and in whom he had confidence for the purpose of checking plates and makeready. He stated that as a result all the men are better pressmen because of



"How do you know you know?" is Craig Spicher's supplemental slogan which has been adopted by Production Manager H. G. Bradley of the Eli Lilly & Co. Printing Department, Indianapolis. His organization is research minded. He admits: "In printing from rubber plates we are a flat tire," but stated that his plant is printing from synthetic plates and thinks it will "get some place."

Waxed Surfaces Help Production

PRODUCTION Manager H. G. Bradley of the Eli Lilly & Co. printing plant, Indianapolis, in a recent address, recommended that Simonize wax be used on the working surfaces of certain printing machinery for eliminating static electricity and to provide a slick surface which is easily kept free from dirt and dust accumulations. Its use is a great aid to production and cleanliness. The wax is used on ruling machines, stitching machines, folders, the beds of paper cutters and cylinder draw sheets. On Saturday nights, the beds of cutters are washed clean and coated with Simonize wax. On Monday morning the working surfaces are polished off before commencing work. "Use it any place, on wood, metal or cylinder draw sheets," said he. "We borrow from the automobile slogan: " 'Printers Wise, Simonize.' "

this man's ability to point out defects in form and press preparation.

The speaker has been told that many printers don't know how to figure work properly. In one instance, the manager of a printing plant spoke critically to him of a competitor to whom he had just lost a job. The printer stated the competitor "doesn't know his stuff", because he doesn't even know how to figure the cost of paper. The complaining printer felt certain the competitor was going to "lose his shirt" on the job. He didn't know that the successful bidder was operating fast high-speed presses and folders which enabled him to make a profit.

Paper Standardization

Mr. Bradley discussed standardization, especially with respect to paper. Lots of people think that standardization is impossible of accomplishment. One printer standardized on No. 2 enamel. Previously, 15 different makes of No. 2 enamel were used in his plant. He was asked if he got the same results from each. The printer replied: "No." When asked why he used so many kinds previously, he stated that each salesman personally preferred a certain kind.

The speaker advised that in the case of the Vertical press, the paper should be cut to as large a size as possible to avoid wrinkles. For a 9 in. by 12 in. job, cut the paper to 9½ in. by 12½ in. to allow gripper and tail margins.

The grain in paper stock is one of the greatest things in the world to help the printer in providing a better looking job if he will take advantage of it. For instance, in the Lilly plant, hyphen or slot perforating is preferred. By perforating *with* the grain a much smoother looking job is obtained. When one perforates across the grain, the rule crushes into the paper fibres. By perforating with the grain the rule lasts twice as long. With three parallel fold work the grain in the paper should run up and down the sheet for better folding qualities. On cylinder presses, lay the grain of the paper the long way of the cylinder.

Skill is Not in the Ink Can

In discussing printing inks and some of their properties, Mr. Bradley told about a friend of his who stated that he had bought a great many cans of ink since he had entered the printing business 15 years ago. During that time, his friend asserted he never had bought a can of ink but what there wasn't something wrong with it. To illustrate that which was lacking in his friend's viewpoint, Mr. Bradley related his own experience while learning to play golf. He bought bag, clubs and balls and started to play. He didn't think he was getting along fast enough. An excellent golfer who used the brand advised him all his troubles would be over if he would buy Top Flights. He bought a box of them. With great anticipation he went out to the course expecting to come home with a fairly decent score as the result of using the new ball. He soon discovered that no matter what brand of ball he used that he had to know *how* to hit the ball.

From this little illustration, the speaker demonstrated to Craftsmen that it takes craftsmanship (skill) to do good work. As Craftsmen, we should not be satisfied with less. Sometimes, when the ink isn't working just right, it isn't always the ink maker's fault.

So far as each individual plant is concerned, Mr. Bradley recommended that inks for different purposes be standardized within the shop. For instance, if it is found that Smith's ink has been found best for proving work in your plant, standardize on that brand. The same procedure should be followed in the case of each ink which is made for a certain purpose. Personal preference (the human element) should be considered at all times when the expected results are to be obtained.

When mixing of colors becomes necessary in order to get a certain shade, keep a record of the formula so that when that job comes up again, getting the desired color will be simplified. Put a sample of the ink in a glassine bag and stitch it to a specimen of the job.

When ordering color inks, ask the ink maker to make the colors strong. The speaker said: "Gentlemen, we're good at cutting down, but we're not worth a damn at building up."

160,000 Americans die of cancer annually. Authorities say *many of these deaths could be avoided.*

Help us spread the knowledge that *cancer can, in many cases, be cured.* Enlist today in your local unit of the Women's Field Army.

In the Metropolitan Area, address the New York City Cancer Committee, 130 East 66th Street.

AMERICAN SOCIETY FOR THE CONTROL OF CANCER
350 Madison Avenue, New York, N. Y.

Brass Plates for Label Work

The speaker stated that approximately 13,000 kinds of labels in one or more colors are used for Lilly products. All of the plates are 11 pt. brass. Brass is used because of the ease with which plates may be patched for corrections from time to time. He stated that on a single run there might be as many as 60 plate changes in a single form.

It has been a tradition among many printers that paper uncoated one side must always be used for labels. In his plant, a 37 lb. sheet coated two sides is used. These can be gummed at the rate of 120 per min., and he finds that there is less tendency for the stock to curl. Aside from this quality, the labels adhere to bottles and packages just as well as the uncoated one-side paper.

Electros on Wood

In the Lilly plant, it has been found convenient to have black electros mounted on wood. Some of the runs from electros run from 150 thousand to 200 thousand. From the production standpoint, experience has shown that wood mounted electros work out very well, especially since the first plate nearly always is a composite. He said that as many as 15 separate runs have been obtained from single sets of wood-mounted electros. The blocks are oiled by the electrotyper from whom the plates are purchased.

In mounting plates, a sheet of 60 lb. eggshell paper is interposed between the plate and the wood block. Glue is applied to both sides of the paper, after which the plate is held under pressure in an old-style copy press for a time, after which

the plate is tacked down in the usual manner to the block. Use of the paper liner permits removal of the plate from the block when necessary.

When asked how long plates will run, Mr. Bradley stated: "I don't know. When a nickeltype starts showing wear, we start immediately to check up on our presses. I think a 'slip' in a press wears plates. I don't know what your experience has been with regard to plate wear, but we keep the press bearers free of oil at all times."

It has been the experience of the speaker that the experimental use of infra-red drying equipment on Vertical presses is at least 90% as good as a spray attachment—and it's operation is clean. Further experimental use is under way."

"Would Kill Anyone Wanting to Remove Line-up Table"

Mr. Bradley's comment upon the use of a line-up table in the Lilly plant was as follows: "It took twenty years to sell us on the idea of using a line-up table. Now we would kill anyone wanting to take it away from us." He enumerated a number of its uses, among which were: Sheets are marked up showing how they should be cut; the cutter does not trim paper unless he is furnished a marked-up sheet showing the dimensions; one of the best ways to get wrinkles in a sheet of paper is to send paper to the press which is out of square with the grippers; the stoneman draws up a sheet for the bindery to show where the folds are located.

Value of Motion Studies

He referred to the value of motion studies in the printing plant and stated that printing executives should study the subject persistently. Application of motion studies simply means reducing the number of motions to do a certain task and to make the work easy for the one doing it.

Process Color Rotation

So far as Lilly process color printing is concerned, Mr. Bradley stated he doesn't think it makes a lot of difference whether plates are run in the rotation for which they have been made. For instance, he finds this order the best for his work on a two-color press: Yellow, black, red and blue. In particular, by printing the red over a transparent yellow a beautiful color is obtained in which the purple cast is eliminated. A transparent first-down yellow adds finish to the job.

Voluntary Conservation Plan Would Effect 10% Saving in Commercial Print Paper

ON March 26, representatives of the nation's commercial printing industry joined with executive officers of the United Typothetae of America in placing before the War Production Board a program for a voluntary conservation which seeks to eliminate "frills" and effect a 10% saving in paper.

The recommendations were presented in the form of an industry study of paper conservation as applied to the commercial printing industry, and was sponsored by the U.T.A.

Discussions of the paper situation starting in July 1942 by U.T.A. leaders resulted in the formation of a special committee of printing industry representatives for the purpose of bringing together "suggestions and recommendations for the conservation of printing papers, the raw materials, manufacture, transportation and distribution thereof." After many months of exhaustive research and study, the committee presented an 82-page report.

Basis for "immediate reduction" in the use of paper is a standardization of weights, grades and sizes of paper stock, the study revealed, rather than a flat curtailment of tonnage.

In the preface to the paper study, the committee stated, "It is our studied opinion that more paper can be produced with the same equipment and personnel —or the same amount of paper produced with considerably less equipment and personnel—if this committee's recommendations are followed.

The report was presented to Deputy Director E. W. Palmer, of WPB's Printing and Publishing Division at a luncheon-meeting held in Washington, D. C.

Thomas B. Sheridan, president of the Baltimore Graphic Arts Association, pointed out that an "equitable" plan for effective conservation could be set up by the printing industry itself.

"It will take too long", Mr. Sheridan said, "to try to educate several million buyers of printing to conserve on paper and we have already used up all the time we can spare.

"The more practical way to attack the problem is from the viewpoint of manufacture and distribution and the one hopeful outlook for an immediate reduction in the use of paper is to standardize weights, grades and sizes of paper stock."

At the present time, the report said, there are more than 12,000 "kinds" of paper, which includes size, weight, color and other measures. These could be reduced to 4,000, thus saving tonnage and manpower for shipment and distribution.

Mr. Palmer praised the report as a "monumental work" but warned that due to demands of the Government and the armed forces further curtailments would be necessary "unless some plans were worked out now."

Craftsmen's Sixth District Conference

The annual conference of the Sixth District of the International Association of Printing House Craftsmen will be held on Saturday, May 15, at the Furniture Club, 666 Lake Shore Drive, Chicago.

Leon A. Link, Mechanical Consultant, Printing and Publishing Division of the WPB, will come from Washington to address the morning session on "Conservation." He will be followed by Douglas C. McMurtrie, Director of Typography, Ludlow Typograph Company, and Chairman of the Educational Commission of the International Association of Printing House Craftsmen. The subject of Mr. McMurtrie's address will be "Present Trends and Future Prospects in the Printing Industry."

The afternoon session will present a streamlined clinic on "Letterpress, Offset and Gravure," headed by a panel of leading men to represent each branch of the industry.

Deputy Director E. W. Palmer of the Printing and Publishing Division of WPB, after receiving the report from President Thomas B. Sheridan (right) of the Baltimore Graphic Arts Association, discusses plan sponsored by UTA for voluntary commercial paper conservation.

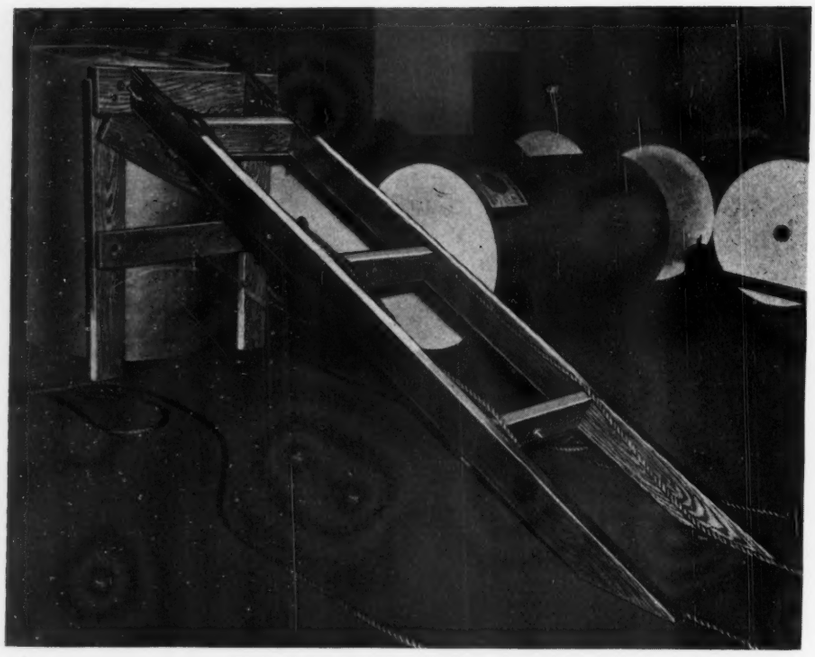


Fig. 2.—Completely assembled skid to which is attached same height frame as the roll which is to be unloaded, is now in position so that tiered rolls in upper layer can be lowered easily and safely. Chain extending from crosspiece in frame to lower crosspiece in skid prevents spreading of frame and skid under weight of newsprint roll. Newsprint handler places half-hitch in ropes over each end of roll so he can control movement of roll while it is being lowered to floor.

SIMPLE SKID *provides means for unloading upper layer of decked newsprint rolls from freight car —*

By A. E. ROSENE*

*Mechanical Superintendent, St. Paul (Minn.) *Dispatch-Pioneer Press.*

RAILROAD freight cars in which newsprint rolls are shipped from the mills to the consumer are now being deck-loaded in increasing numbers to conform with the Government's minimum weight-loading regulations. This, of course, is caused by the demand for cars for effective prosecution of the war. As a result, the newspaper printing industry must now make one freight car do the work of two cars as loaded in single-deck fashion in pre-war days. In addition, our publishers and the Government are urging mechanical executives to hold their damage and waste to the minimum because of newsprint rationing.

It seems to be a simple matter for the mills to deck-load railroad cars because they possess the necessary equipment, but not all newspaper plants are fortunate enough to possess the special trucks or tiering equipment. Consequently, we are forced to improvise equipment with which the handle rolls when taking them from the car.

Here in St. Paul, we use a 46½ in. roll for our comic press and a 49⅞ in. roll for our black and white press equipment. Since these sizes are below the minimum loading height of 60 in. when they are loaded on end in the freight car, it is necessary to deck-load the cars so as to obtain full loading capacity.

We have built a simple unloading skid which is applicable to either of the three-quarter size rolls used by us. To make the skid suitable for unloading either height roll, we have provided two frames each of the proper height for the two heights of rolls. The skid itself is instantly separable from either of the frames as will be seen by looking at Fig. 1, it only being necessary for the paper handlers to disengage the hooked ends of the skid from one of the two frames and re-engage the hooks on the other frame.

If decked rolls are to be taken from the top of 46½ in. rolls we use the 46½ in. high frame to which the skid is hooked as shown in Fig. 1, and of course, the 49⅞ in. frame is used for the other size (the 49⅞ in. rolls). A chain (Fig. 2) extending from a crosspiece in the skid to a crosspiece in the frame, and fastened by means of a bolt in each crosspiece, prevents spreading of frame and skid. The skid is then shoved against an upended roll as is shown in Fig. 2.

The paper handler then places a half-hitch in the rope over each end of the descending roll. By standing on top of an upended roll he is able to lower the roll and at the same time retain complete control of it all the way to the floor.

Up to this time, we have not lost a roll with this method of unloading. In the past, however, we had some bad experiences when our men used the usual tipping pad. Under the old method, occasional rolls were damaged badly and paper handlers were injured, neither of which we can afford at this time. Our low transit waste percentage will attest the practicability of this very simple but effective unloading device.

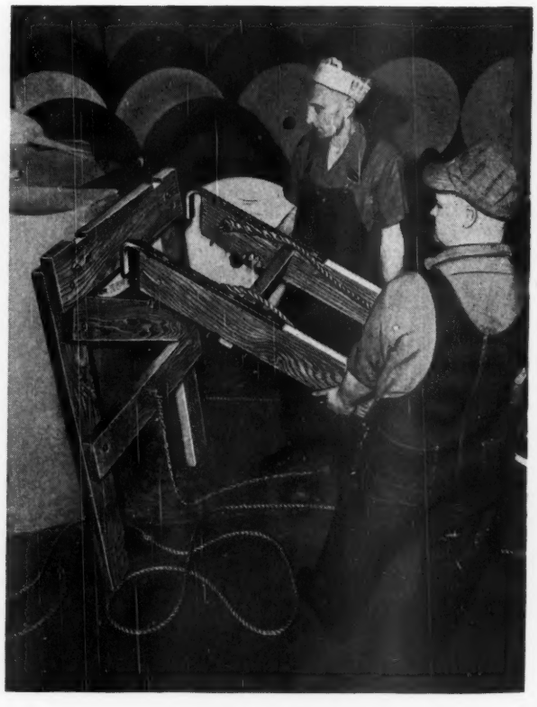


Fig. 1.—The St. Paul (Minn.) *Dispatch* and *Pioneer-Press* employs two lengths of newsprint rolls. Freight cars are loaded to capacity by decking a layer of rolls on top of the layer on car floor. To lower the upper layer of rolls without damaging them, this simple skid device was built. Two frames (one of which is shown at left) of the same height as the rolls were built. The skid may then be hooked into the frame corresponding to the height of the rolls which are to be unloaded.

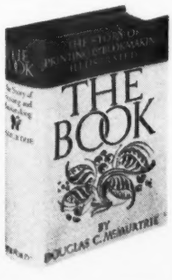
The photos from which Figs. 1 and 2 were made are the work of Meda St. Pierre of the Duluth (Minn.) *Herald* and *News-Tribune.*

BOOKS
RECEIVED

The Book—The Story of Printing and Bookmaking

OXFORD University Press has announced publication of the seventh revised edition of *The Book—The Story of Printing and Bookmaking*, by Douglas C. McMurtrie. The author's approach to his subject is historical. In *The Book* are covered the origin of writing and of the alphabet; the beginnings of printing in the Far East; writing materials; the genesis and early history of paper; books in manuscript and their scribes and illustrators; the European invention of Printing and its dissemination; type design and its development; book illustration and decoration; bookbinding and the work of celebrated binders; the work of eminent printers such as Jenson, Aldus, Plantin, Baskerville, Didot, Bodoni, Benjamin Franklin, William Morris and their recent successors; the private presses; and finally, contemporary book designing, typography, and illustration, and the ideals of today's book designer.

The context of *The Book* is written simply and in its pages will be found the answers to any but the most specialized and technical questions about books and their makers. Book design and bookmaking are discussed extensively, including modern typography, book illustration, processes of bookmaking, art of book binding, printing of illustrations and the title page.



More than 170 illustrations, including some 120 reproductions of title pages, text pages and engravings from famous books. There are 43 pages of bibliographical references and a comprehensive index.

In addition to being a highly educational work, *The Book* is a valuable reference volume which should be in every printing executive's library.

The Book—By Douglas C. McMurtrie. Published by Oxford University Press. Size 7⅛ in. by 9¾ in. by 2 in. Over 700 pages including a number of inserts. Copiously illustrated. Bound in blue buckram with gold stamping on reference edge. May be ordered through *Printing Equipment Engineer*. Because of the limited handling margin, please enclose $5 per copy with your order.

Practical Compliance with L-226 Helps Get in Critical Scrap

IT IS understood, of course, that in complying with the scrap metal reclamation provisions of WPB order L-226, all printing plants cannot collect the poundage of discarded brass line-composing machine matrices shown in this illustration. The small plant's contribution of discarded machine parts, however, is just as important in the war effort as the large plant's turn-in. The theme song of the Printing and Publishing Division of WPB is that the collective scrap contributions of all plants, irrespective of the amount turned in by each, is highly important to winning the war.

In this picture, Machinists John Schutt (left) and Frank Cornell (right) of the Cleveland *Plain Dealer*, under the direction of Chief Machinist Ike Challifoux, are shoveling 1000 lbs. of discarded line-composing machine matrices into a barrel, preparatory to shipment into scrap channels.

Composing Room Superintendent Deo Padgett explained that after WPB's Machinery, Operating Supplies and Replacement Parts order was issued, a search for critical scrap material was conducted. The 1000 lbs. of matrices represented several years' accumulation—as the result of renewing news and agate dresses in the *Plain Dealer*.

Perhaps Plain Dealer executives are a little more conscious of the Government's need for getting in the scrap since Production Manager Leon A. Link is a member of the Printing and Publishing Division. Mr. Link asserted, however, that if all mechanical executives would think of the number of boys from their plants in the armed services (at the *Plain Dealer* the number is in excess of 100) and also translate their thinking into terms of rounds of ammunition which can be provided these men from the scrap turned in, there wouldn't be any question that printing plant scrap collections would be 100%.

Newspaper Presswork Unit

SUPPLEMENTING the first 12 units on *Newspaper Presswork* published some time ago, the Technical Trade School, Pressmen's Home, Tenn., has published Unit 13 of the series which is devoted to the Hoe Arched-Type Super-Production Anti-Friction-Bearing Newspaper Press and Folder. The Hoe Automatic Reel, Tension and Full-Speed Paster are also discussed in this latest volume which consists of 79 printed pages and is of the same size as the previous units.

Construction, adjustment and operation of the Hoe press are carefully explained. The text is amplified by many halftone and diagrammatical illustrations.

The series of lesson booklets were prepared under the supervision of Director Fred Hudson of the Newspaper Engineering Dept. The technical discussion is very well done and is easily comprehensible.

These reference manuals were prepared for members of the International Printing Pressmen and Assistants' Union of North America, who may obtain further particulars from the Technical Trade School, Pressmen's Home, Tenn.

Prevue Meeting at which Guide is exhibited demonstrates that official Washington is appreciative of Graphic Arts Victory Committee's vital help in industry-wide campaign to help put over war-winning objectives — GAVC now being incorporated

By C. V. MORRIS*

*Wm. E. Rudge's Sons, New York, N. Y.

NEVER let it be said that official Washington doesn't appreciate a wholehearted, unselfish, industry-wide program in support of the Government's war-winning operations. Never let it be said, either, that official Washington isn't jumping at the opportunity to enlist an industry *bent on finishing off the Japanazis* before "taking on" the administration and the compulsory and unpalatable wartime restrictions, curtailments and such.

Chairman A. G. McCormick, Jr., is National Executive Chairman of the Graphic Arts Victory Committee, now being incorporated into permanent organization. In speaking of the GAVC *Guide*, just published by the Committee, he said at the Washington meeting: "It is almost unbelievable that so few men could accomplish so much for so great an industry."

Almost one hundred interested printer, lithographer and trade association executive supporters of the Graphic Arts Victory Committee's work beamed throughout the all-day meeting staged jointly by the GAVC and the office of War Information in Washington, D. C., on Friday March 26. Occasion for the meeting was to analyze and determine how the printing industry could be of greatest assistance to Government through practical use of the 64 page *Guide* which is now being distributed to printing executives throughout the nation.

Mr. Superintendent, the Graphic Arts Victory Committee—*your* tradespeople—received the plaudits of all of the Government's executives charged with carrying the Government's public relations and education programs to 130,000,000 American citizens. Fitting triumph after the year-long recruitment of workers and contributors to the industry-wide movement.

There they were — eighteen officials —representing official Washington, among whom were: Gardner Cowles, Jr., Deputy Chief, Office of War Information, speaking for OWI Director Elmer Davis; Seymour Morris, OWI deputy, outlining the great, over-all, OWI program; Public Printer Augustus E. Giegengack foreseeing a better and more successful education campaign via the printing press; H. Andrew Dudley, Chief, Division of Campaigns, OWI, presenting all the Government public relations men and their activities—there they were, all of them, praising the Graphic Arts Victory Committee and its 64 page *Guide To Essential Wartime Printing and Lithography*, to the first spring skies.

"The *Guide to Essential Wartime Printing and Lithography* is by far the outstanding contribution to the Government's program of education," said Mr. Cowles at the morning session. "Here is absolute evidence of the cooperation an industry can offer, once organized intelligently and pointed in the proper war-winning direction. I heartily congratulate the Graphic Arts Victory Committee, its guiding spirits and the great printing and lithographic industries for this manifestation of interest and assistance which I know full well is only the beginning."

Mr. Cowles wasn't alone in voicing his appreciation. Paul Bolton, Information Director for the Office of Defense Transportation put it this way: "Gentlemen, you have accomplished an outstanding job in gearing your industry for an all-out contribution to the winning of the war. I wish the Office of Defense Transportation had an "E" or other suitable award for meritorious service, for I would bestow it upon the Graphic Arts Victory Committee. Your *Guide to Essential Wartime Printing and Lithography* is without doubt a book that will do more to help the Office of War Information's complete program than any individual or cooperative effort yet contributed. It deserves all the praise heaped upon it. But *I am particularly grateful* for your contribution of the Convention-By-Mail manual which your committee prepared, planned and produced in behalf of the Office of Defense Transportation. The manual is already responsible for a great number of mail conventions."

And so went the comments—official comments. GAVC hearts thumped a little louder — pulses pounded — faces flushed with pride—chests puffed out—for in the audience were the men who produced it, and some of the men representing companies who contributed funds to make the Graphic Arts Victory Committee possible.

OCD Distributes 20,000 Guides

Louis Birk, Acting Chief of Information, Office of Civilian Defense, expressed the gratitude of James A. Landis, OCD head, for the contribution of 20,000 copies of the *Guide* now being distributed by CDVO to leaders from coast to coast.

Yes, sir, Mr. Superintendent, your industry—your sales staff and your presses are right up to here in war—all out war. The Graphic Arts Victory Committee sold Uncle Sam on the power of the printed word—sold Uncle Sam on the idea that the men and machines of the Graphic Arts are rallying 'round the flag from now 'till Victory. It's the industrys' job to deliver the goods."

OWI Looks To Advertisers For Assistance

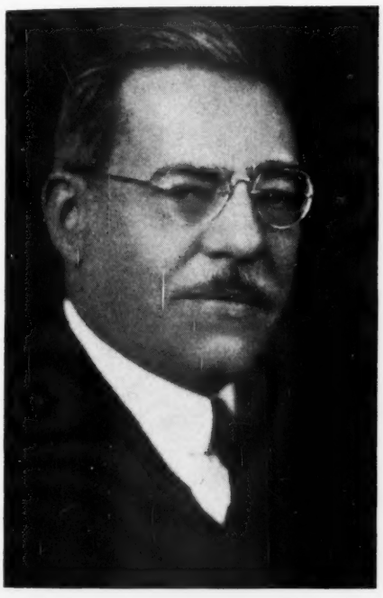
It is important for you printing executives to know that all the agencies—Office of War Information, Office of Price Administration, War Production Board, Office of Defense Transportation, War Manpower Commission, the

Public Printer A. E. Giegengack is Honorary Chairman of the Graphic Arts Victory Committee. Said he at the recent meeting in Washington: "The stoppage of printing would terminate the war effort in a short time."

Treasury Department, the Office of Civilian Defense and the Department of Commerce—are expecting the Graphic Arts industries to help share the burden. Each of the agency information heads, and their clearing house, the Division of Campaigns headed by "Drew" Dudley, see the need for cooperative action between the private advertiser and the government. "No Government publicity work has the pulling power of that which takes its cooperative place in the advertisements of companies whose promotion efforts find justification in the government tie-up," Mr. Dudley commented.

'Canned Appeals Don't Register'

Herman Wolf, assistant to the acting chief of War Production Drive headquarters, stressed the need for specific handling of plant incentive programs.



Vice President Harry A. Porter of the Harris-Seybold-Potter Co., is also treasurer of the Graphic Arts Victory Committee—to whom nothing seemed more important than the endorsements by Government officials of the GAVC cooperative program.

"The material originating in the War Production Drive headquarters now misses the mark," Mr. Wolf said, "as does most of the syndicated promotion. To actually inspire and evoke interest the ideal program is centered around "themes" close to the plant and the plant workers. *'Canned' appeals don't register.* That means plant production chiefs, personnel and sales promotion men are responsible for the success of the program. That also means printing is an essential part of the work—*printing that can be done in the area.*"

If the plaudits of official Washington delighted the members of the Graphic Arts Victory Committee, and the interested printers and lithographers who went to the OWI-GAVC conclave out of curiosity, the evidence of the crying need for printed assistance served notice that a made-to-order and strictly essential printing market exists. Printing and lithography can contribute to the over all Victory march.

That's the kind of news you've been waiting for, Mr. Superintendent. You're ready to gear your presses to Victory's standards.

Nothing seemed more important to Harry Porter, vice president, Harris-Seybold-Potter Inc., who is also finance chairman of the Committee; Edson S. Dunbar, sales promotion manager, Crocker-McElwain Co., and organizer of the early activities of the Committee; Henry Hoke, managing director of the Committee's activities, who, through tremendous effort has brought to completion the committee's greatest effort, and to Frank Sohl, vice president of Githens-Sohl Corporation, New York printers and his co-worker Richard Messner, of E. E. Brogle Company, New York.

New national executive chairman, A. G. McCormick, Jr., McCormick-Armstrong Company, Wichita, Kas., admitted marvelling at the progress of his associates. "Unbelievable that so few men could accomplish so much for so great an industry," he said.

Other enthusiastic supporters of GAVC present at the meeting were: Herbert Kaufman, advertising manager, General Printing Ink Corp.; Ernest Trotter, editor, *Printing*; R. B. Huddleston, sales promotion manager, American Type Founders and Frederick G. Rudge, president, William E. Rudge's Sons, New York; R. Reid Vance, Chairman of the Local and Regional Committee, Columbus, O., accompanied by Harrison M. Sayre, president, American Education Press and chairman of the Committee on Education. "Cy" Means represented his Detroit Graphic Arts group. W. Arthur Cole, was an interested spectator for the Photo-Engravers Board of Trade, New York. Maurice Saunders represented the Lithographers National Association; Walter Soderstrom, the Eastern Lithographers and the National Association of Photo Lithographers. Irwin Slote, executive secretary of the Paper Trade Association of New York also sat among the trade group conclavers.

Space forbids reporting the names of all those in attendance, but this report wouldn't be complete if the following names weren't included: George Welp, advertising manager, International Printing Ink Corp.; David Sloane, representing the National Association of Printing Ink Makers; Anthony Math, president, Sinclair and Valentine Co.; Bromwell Ault, president, International Printing Ink Corporation; Louis R. Beck and Jack Valiant, Harris-Seybold-Potter Co.; Charles Titsworth, vice president, Miehle Printing Press and Mfg. Co.; J. Stewart Jamieson, president, Lincoln Engraving and Printing Co.; Eugene Kelly, president, Eilert Printing Co.; Ellis T. Gash, representing the Graphic Arts Association of Illinois, Inc.

15 Major Government Victory Projects

Uncle Sam needs immediate aid in promoting these fifteen specific current campaigns. By persuading the advertiser to help, the printing executive and the advertiser simultaneously serve both business's and the nation's interests.

1. RATIONING
2. TRANSPORTATION
3. CONSERVATION
4. SALVAGE
5. REDISTRIBUTION OF MATERIALS
6. MAINTENANCE OF DURABLE GOODS
7. PRODUCTION DRIVES
8. NUTRITION AND HEALTH
9. MANPOWER
10. ANTI-INFLATION
11. TREASURY DRIVES
12. MORALE
13. SECURITY OF WAR INFORMATION
14. BUSINESS CLINICS
15. WAR FUND DRIVES

GRAPHIC ARTS VICTORY Committee

Mechanical Executives

are invited to send to the editor descriptions of things which have been devised in their plants and which will be of interest to executives. Just write in the form of a note—on the typewriter, have an operator set it up and take a proof, or just use the old pencil and any kind of proof or paper.

L-226 *discussed from dealer's stand-point —*

Why certain provisions are contained in the order

By DAVID B. FELL*

*Chief, Printing Machinery Section, Printing and Publishing Division, WPB, Washington, D. C. Abstract of address delivered before Printing Machinery Dealers' Association, New York, March, 1943.

ORDER L-226 really is two orders in one: A machinery order and a repair parts order. We will consider it first as a machinery order. Paragraph (c) of the order regulates production and it regulates sales. After January 30, 1943, no person shall produce graphic arts machinery except for the armed forces overseas. Exceptions to this restriction will be considered only on formal appeal on Form PD-500. For example, a manufacturer might have suffered a cancellation in his war work and need authority to assemble some of his graphic arts machines from material he has on hand, in order to tide him over the gap in his production schedule until he will again be tooled-up and rolling full speed ahead on war work. Or some pressing need might arise for war ration books, requiring a special machine to be built from scratch. In such cases, permission might be granted, but only after formal appeal on Form PD-500. So much for the restriction on producing new machinery. What about the sale of it?

After January 30, 1943, no person shall deliver or accept delivery of graphic arts machinery unless such delivery is on an approved order. An approved order is an approval granted by the Printing & Publishing Division in Washington on Form PD-556.

What kind of equipment require an approved order before you can sell them? All kinds listed in Schedule A of the order, if they are new machines, or if they are used machines which have been delivered to their original user after May 1, 1937. That fixed date, we believe, will be easier to keep track of than the former "five-year-old" phrase. Also all machines of a value over $25 require an approved order.

Immediately, that $25 exception will raise some questions. For instance, you get an order for 10 numbering machines of a value of $8 each, or a total sale of $80. Do you need an approved order? No, because each numbering machine in this instance is a single piece of graphic arts machinery having a sales value of less than $25. Take another example, "plate mounting bases" (patent bases). They may come in sections, each section worth $3. But an order may run to a couple hundred dollars. How shall that be handled? In two ways: If the order is for sections needed to supplement and fill out a form of base, even though it exceed $25, it should be regarded on the "single-piece" basis and will not require an approved order. But, if a plant wants to buy a whole base to outfit one or more press beds, then that sale should be regarded as a whole and would require an approved order on PD-556. When in doubt, apply on Form PD-556.

EDITOR'S NOTE:

We are printing below abstracted portions of Mr. Fell's recent address in which he discussed WPB's Machinery Order L-226 in the hope that it will give printing plant executives a better understanding of its provisions. The order really is a "two-way" order—it affects both the manufacturer and the consumer. Mr. Fell discusses the order as it affects both.

You will notice that paragraph (c) (3) provides a group of exempted transactions. A manufacturer may ship new graphic arts machinery to a distributor for his stock without an approved order. This has been permitted because it may often be in the interest of the war effort and of emergency civilian needs to have machines strategically spotted in dealers' hands, available for more prompt delivery. However, it must be understood that such shipments to distributors are dependent entirely upon whether the manufacturer has the finished stock on hand. If he has not, then this permission won't help the dealer, because we are not going to build machines to put in dealers' stocks.

Supposing you have a customer for a machine which requires an approved order. How do you get an approved order? Have the customer make application on Form PD-556, filling out four copies, referring in the applications to L-226 and mailing all four copies to the Printing & Publishing Division, WPB, Washington, D. C.

Let us examine Form PD-556 a little. In the upper right hand corner, fill in the order number L-226, Printing & Publishing Division, and the date. The form is so written that either buyer or seller may file it. But we want the buyer to make the statements. So the buyer's firm name, street and city should go in the right-hand section. Be sure to tell who is the supplier. That is important for we usually check to find out if the supplier has the item wanted before we approve it.

On the reverse of Form PD-556, the buyer should answer the questions asked, and at block 5, he must give the answers to the three questions in paragraph (g) of L-226. Here are the questions: Is this machinery an expansion of existing facilities or a replacement? If replacement, how will you dispose of the old machine? Have your customers give us an answer to that question every time. The other two questions are: Have you any similar machinery in your plant now? And how are you accomplishing the job now?

Please notice that Form PD-556 makes no provision for a priority. It comes back to the buyer marked "Granted" or "Denied". If it is granted, a duplicate copy is also mailed direct to the supplier by the WPB. If machinery is available in Manufacturers' inventory, no priority will generally be needed. If the machinery is not in stock, and an approved order is granted, then it is up to the War Production Board to give the manufacturer authority to produce the machinery and authority to get the material from which to build it.

We have considered L-226 so far only as a machinery order. Now what about Order L-226 as a repair parts order? Briefly here are the provisions:

Paragraph (a) allows producers to schedule—get that word "schedule"—the manufacture of operating supplies and replacement parts as if the orders therefore bore a rating of AA-1. Actually, no rating is conferred and this is not a rating which printers can pass on to the manufacturer and it is not a rating that the manufacturer can pass on to the warehouse or steel mill to get more materials. The only reason for paragraph (a) is this: It allows a manufacturer to set aside his direct war work from time to time in order to make repair parts for our industry. It is not compulsory that he do so, but he may.

Paragraph (d) and (e) of the order contain restrictions on the quantities of operating supplies and of repair parts that may be produced. These paragraphs are of little concern to dealers, but it is important that they understand why the restrictions are in the order. Further *manufacture* of these items is restricted to 72% of 1941 on operating supplies; 120% of 1941 repair parts; and further *delivery and sale* of these items is restricted to require either the turn-in for scrap of old parts for new, or a certification that old parts of like kind will be scrapped.

What explanation can we offer for these restrictions? As for the *manufacture* of operating supplies and repair parts, we have attempted to provide enough of these items based on our belief as to what the 1943 demand will be, but no more. The supply of steel, copper and other materials is too limited to sanction unrestricted manufacture. For example, in the fourth quarter of 1942, the machinery builders in this industry were allowed

(Continued on Page 42)

Small Matrix Orders Under L-226

MECHANICAL and production executives were advised last month that composing machine makers were cooperating with WPB in helping to get in scrap brass matrices under Machinery Order L-226. The idea is for the printing plant to sell such scrap matrices through local scrap channels. The seller is to secure a receipt from the junk dealer showing the weight in pounds. The receipt in turn is to be forwarded to the composing machine manufacturer who will place a credit on his books against future purchases of matrices by your company.

An executive of one of the composing machine makers has called our attention to the inadvisability of using this plan in the case of the smaller printing plant whose usual matrix orders are small. In the case of the small matrix order, it is best to comply with the stipulations in Order L-226 by which you certify on your purchase order that within 30 days after receipt of the new supplies or parts you will dispose through scrap channels of a used part of similar kind and size for each new replacement part delivered to you.

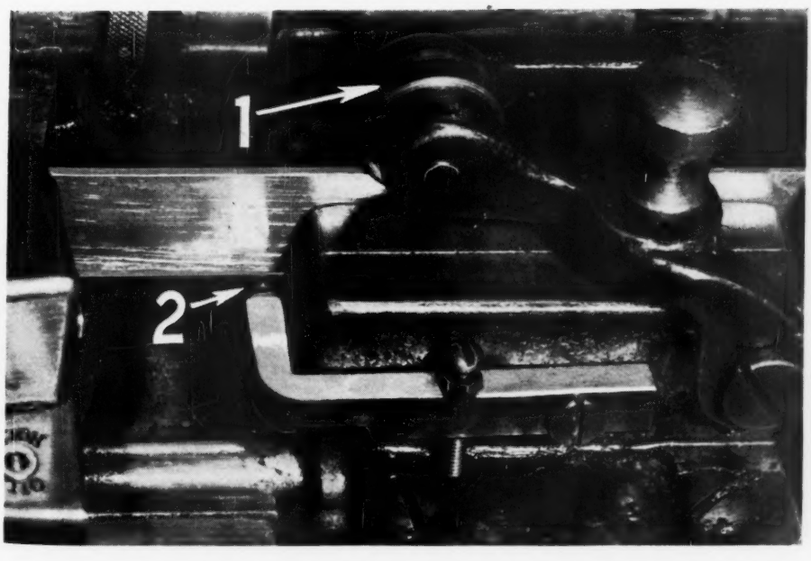
Scoring Device enables ad and makeup men to identify "right side up" position of Oxford and varied-face strip material rule

By HOMER LIVINGSTON*

*Plant Superintendent, St. Petersburg (Fla.) *Evening Independent*

IN ad composition and makeup operations, it is difficult for the ad or makeup man to distinguish the pattern on Oxford and other rule with more than one face on newly-cast strip material. To get away from this difficulty, we have devised a scoring device which is attached to the front of the material clamp bracket on our Elrod strip material caster. The lightly scored mark on one side of the rule body serves the same purpose as the nick on Monotype-cast, foundry type, or the rib on the slug from a line-casting machine.

The scoring device is fashioned from a section of Linotype keyboard keyrod 2⅝ in. long. A hole to receive the fastening screw as shown in the illustration is drilled approx. ½ in. from the end opposite the scoring end. The scoring end is filed to a point. The scoring piece is then bent to fit around the corner of the material clamp bracket, and is fitted so that the point will bear lightly against the strip rule when the screw is tightened, and scores the rule as it is pulled through the machine.



Auxiliary roller *2* supported by adjustable bracket on Elrod material caster in Cleveland *Press* is used in conjunction with regular roller *1* to straighten out occasional bowed strip material. The roller *2* and bracket were devised by Machinist Jack Davis.

The scoring point may be rendered inoperative when casting leads and slugs or other borders where scoring is not necessary, by placing a specially slotted piece of 12 pt. border rule between the scoring device and the clamp block bracket. This piece is 3 picas wide, into the center of which a slot has been cut with the composing room saw-trimmer.

The regular clamp bracket screw was replaced with one ⅞ in. long to permit holding the scoring device and the material clamp bracket plate.

Another item which may be of interest to executives in other composing rooms is that the printing face of our ad cut-off rule is centered on an 8 pt. body. This eliminates placing a 2 pt. lead on each side of the cut-off rule. In other words, the makeup man handles one piece of material instead of three as formerly, and we also save a lot of 2 pt. casting time on our Elrod.

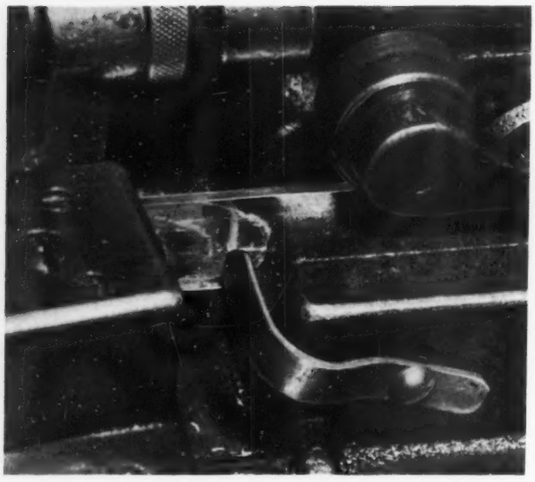
Auxiliary Strip Material Rule Guide Roller

A SUPPLEMENTARY suggestion about the casting of strip material on an Elrod has been received from Composing Room Superintendent James Kelleher of the Cleveland *Press*. The device described here was devised by Jack Davis, one of Chief Machinist Al Krueger's assistants. In discussing the device, Mr. Krueger makes it plain that attachment for elimination of occasional bowing in strip material are not to be considered substitutes for neglect of common maintenance practices as outlined by the Ludlow Typograph Co. In other words, if the mold isn't seated properly and if a thin film of oil is not maintained on both the top and bottom faces of the strip material, no straightening device of any kind is practicable.

Mr. Krueger explained that the Elrods used in the Cleveland *Press* composing room are operated two and three shifts per day, six days per week. The bowing of strip material at the *Press* is not a common occurence, but when it does occur on 3, 4 and 6 pt. material, the regular material guide roller, **1**, as furnished by the company on its machines, plus Mr. Davis' auxiliary roller, **2**, can be brought into use to quickly eliminate either convex or concave bowing, according to which occurs. Use of the two material guide rollers, obviates the occasional resetting-up of the machine including resealing of the mold chamber.

It is a practice at the *Press* to inspect strip material every three or four hours during each shift to see that the rule is coming from the machines properly. Only occasionally is it necessary to adjust the upper or lower material guide rollers.

When the rule is coming from the machine as it should, neither of the guide



The curved attachment shown here attached to the material clamp bracket on an Elrod machine lightly scores the body of Oxford face rule so compositor can tell easily which is right side up, in plant of St. Petersburg (Fla.) *Evening Independent*.

rollers contacts the strip material. Either roller is adjusted only when bowing is evident, which is eliminated quickly after bringing the upper or lower roller lightly against the strip.

The upper material guide roller *1* shown in the illustration is regularly furnished by manufacturers of the Elrod to eliminate convex bowing of strip material. Either convex or concave bowing, however, does not occur as a usual thing, but when it does happen it can be eliminated quickly by adjusting roller *1* for convex bowing, or by adjusting the auxiliary roller *2* for concave bowing. Since the design of the latter device is clearly indicated in the accompanying illustration, a detailed description will not be given here.

MLCo Conducts Mechanical Refresher Courses

PRINTING executives are experiencing a shortage of trained Linotype operators and mechanics. Many are training new employees. To help operators and mechanics to become acquainted with the latest techniques of Linotype care, conservation and maintenance, the Linotype Company is conducting a series of Mechanical Clinics throughout the United States in cooperation with state press associations.

These mechanical clinics are in the nature of refresher courses, and have two main objectives: (1) To assist users of keyboard line-casting machines to maintain their equipment at top efficiency during the war emergency, and (2) To conserve essential raw materials for the war effort.

Throughout the instructions and suggestions given at the clinics, the theme of conservation of raw materials is stressed. It is pointed out that every new replacement part diverts essential raw materials from the war effort. In plain non-technical language, important "do's" and "don'ts" are discussed to assist in guarding against unnecessary wear of parts, loss of time through easily avoided mechanical troubles, and expense of replacements resulting from these causes.

The mechanical refresher courses are built around a series of large "blow ups" of original factory drawings measuring 44 in. by 64 in., which may be seen easily in detail. These drawings cover the complete route of travel of the matrix from the keyboard to its dropping back into the magazine through the distributor. Mechanical functions of the machine, from the main driving clutch to casting and ejection of the slug, are similarly covered by enlarged drawings. Proper care, lubrication and adjustments; what to do and what not to do, and what to be on the lookout for to avoid unnecessary wear and stoppages are discussed.

All of these mechanical clinics are in direct charge of the Linotype managers in the territories represented, with one or more other Linotype maintenance engineers assisting at each session.

The first series of clinics was held in Oklahoma in February in cooperation with the Oklahoma Press Association with meetings in Norman, Clinton, Stillwater and Wagoner.

In March two clinics were held at Montgomery and Birmingham, Ala.; in April at Sumter and Greenville, S. C., and in Atlanta, Dublin and Albany, Ga.

Beginning in May, clinics have been arranged for Mississippi on May 1 and 2 at Greenwood and Jackson.

Six clinics will be held in Texas during May. The schedule includes Houston, May 8; San Antonio, May 9; Abilene, May 15; Dallas, May 16; Lubbock, May 22, and Amarillo, May 23.

"While these clinics, naturally, cannot be put on in every city or town that will want them," Harry L. Gage, Linotype vice president, recently pointed out, "the managers of our various agencies are working out schedules that will treat each section as generously as possible, with the idea of doing the most good for the largest number in the shortest possible time."

Announces War Emergency Program

The Department of Printing at Carnegie Institute of Technology announces it will continue to offer courses leading to the degree of B.S. in Printing during the war emergency as long as students seek such instruction. Classes will be conducted on a year-around basis, permitting the completion of requirements for the degree in two and two-thirds calendar years. All courses normally offered by the department are now in operation with slightly reduced enrollment. The majority of students now registered in the department are on reserve status as potential members in one of the several branches of military service.

The accelerated program was inaugurated and requirements for admission were adjusted to three and one-half years in order to permit younger students to complete a portion of their college training before becoming eligible for selective service. Students who have reached their seventeenth birthday by May 10 will find it possible to complete three semesters of work before reaching their eighteenth birthday. Younger or older students will find it possible to complete more or less work as the case may be. These adjustments were made because it is believed that students who complete part of their college training before entering military service will find it more desirable and convenient to return to college to continue their studies upon fulfillment of military obligations.

The curriculum of the Department of Printing has been modified somewhat to provide instruction in mathematics, physics, and chemistry along with printing courses. These modifications have been made because of the need for training in mathematics and science as a background for officer reserve training in the military branches. This arrangement facilitates transfer from academic status to military reserve status when the student reaches the point of making a decision to enroll in one of the reserve branches of military service.

The Department of Printing is well represented in the armed services. Ninety percent of the students who graduated in 1941, 1942, and 1943 are serving their country in the Army, Navy, or Marines. Of approximately 400 students who have graduated since 1917 from the Department of Printing, 110 (or roughly 28%) are in military service. Many hold commissions, including one who holds the rank of lieutenant-colonel and one who is a major.

1943 ANPA Mechanical Conference

As was announced by the Mechanical Committee, the 1943 ANPA Mechanical Conference will be held in print. The Committee is meeting in New York, April 19, to plan exact procedure.

Government Printing—

Some procedures explained when you do work for GPO—

Causes of delays in payments for completed work

By HON. A. E. GIEGENGACK*

*United States Public Printer. Abstract of address delivered before dinner meeting of the Graphic Arts Industry of Greater New York, Hotel Biltmore, New York, N. Y., February 1943.

YOU will recall that I have said before that I would not expand the Government facilities in an effort to produce all of the work in Washington. This pledge I have kept, and today I am having as much work produced outside by commercial printers as is produced each month in the Government Printing Office, with its ample equipment and 8,000 employees. Since October 1940 the amount paid to commercial printers through the Government Printing Office for doing Government printing has reached staggering figures. To date, the Government Printing Office has procured from commercial sources $32,000,000 worth of printing. This total went to 1014 contractors in 218 cities and represents 9017 separate orders.

It is my hope that after the war is won, return to normal conditions in the graphic arts industry will be easier because of the policy I have followed. Instead of having greatly expanded printing facilities in Washington and, in consequence, a badly dislocated supply of labor, commercial printers can take up where they left off in 1941. As I said before, I adopted a policy of not increasing the Government Printing Office personnel or equipment. Employment in clerical and administrative groups has increased about 10%, while equipment purchases have been limited to maintenance only.

If our 1940 output of $20,000,000 be considered normal, it will readily be seen that only a minor percentage of increased business could be absorbed into the Government Printing Office itself. Let's see what increased production we have had. In 1942 the figure amounted to $49,000,000, and in 1943 I predict that it will exceed $60,000,000. Thus, if $25,000,000 is the maximum capable of being produced in our plant, there will be $35,000,000 worth for commercial printers.

Early in the war I made a very special effort to fit some job into every plant that had a reasonable amount of equipment, but it wouldn't do. Our work is too urgently needed, quantities too large, deliveries too widely distributed to permit much of it to be produced in small plants. The little printers' next question is, "Why not permit us to pool our equipment?", and the answer is much the same. Invaluable time would be lost while paper was being cut to vertical press size, allocations made among constitutents of the pool, and duplicate plates made. There would be no fixing of responsibility. If we let a dozen printing firms print one signature each, the completion would wait on the slowest printer, we couldn't know whom to hold responsible for the loss or spoilage in the bindery, and in the meantime the war effort suffers for lack of a Training Manual.

There seems to be a general impression among commercial printers that just because the Office controls Government printing and in at least one aspect *is* the Government, we have a free hand to operate very much as we choose—and that we can arbitrarily make awards to a printer just because he needs work. As for priorities—what are priorities to the Government Printing Office? I'll tell you what they are. Priority ratings keep us running every day to the War Production Board for a minor press part or stitching wire, just as you have to get them. We have the advantage of being closer to headquarters and the War Production Board knows our man when they see him coming. On the other hand, we need to get many more ratings than you do. The trouble we are put to to get ratings for metal or even plastic fasteners has driven us to the use of the humble shoestring as a replacement. Scarcities may not be a general blessing, but they certainly are a strong incentive in the search for substitutes. Another strong incentive is the element of time. Before Pearl Harbor a large part of our work was done on a generous time schedule. Today the Army and the Navy want every job done overnight. They think 10 days is a wealth of time.

Shortage of Materials and Substitutes

Our representatives sit regularly in conference with the War Production Board to consider questions that have special relation to the graphic arts industry. There are, as you know, the special paper and printing and publishing branches of the Board whose decisions affect the Office just as they affect you. In fact, being closer to it all, we have a sort of preview of impending shortages of this or that material or of plans to divert equipment or supplies to war use, and are able to devise substitutes in advance of the directive. Our Tests, Production, and Planning Divisions have worked out economics and substitutes in metals, inks, papers, fabrics, rubber, and many other items. We are proud of the success we have had in development of plastic printing plates. Still in the experimental stage, we are not prepared to say that they replace metal, though we are confident that they have a future. Even now for special purposes they serve a real need.

One of the last jobs I did before leaving Washington was to write letters to all Government departments notifying them of the necessity to limit use of illustrations in Federal publications and other printing to save zinc and copper. Use of these metals must be restricted, and it can and will be accomplished by intelligent laying out and by substitution of type borders, elimination of wasteful mortises, and so on.

Our desire to economize in the use of critical metals has led us to carry on extensive experiments with the Bureau of Standards on iron-faced electrotypes. The method by which iron can be deposited directly on a wax case is a recent development which will bring about important economies in the use of nickel and copper. In the course of our experiments we made an iron-plated money order plate which ran continuously for nearly eight months, gave over six million impressions, and was taken off the

Excellent Letterhead Idea

A SPECIALLY designed letterhead, printed in red and blue ink on white stock, is being furnished to any employee of the Easton (Pa.) *Express*, for the purpose of writing to former employees of the *Express* now in the armed services.

Mechanical Superintendent Lisle T. Horton stated that two thoughts prompted getting out the letterheads. The first of these is to encourage employees to write to the men in service, and the second is to let each man in the service know where his former fellow-workers are located.

The idea is an excellent one and can be adopted by mechanical executives in any commercial or newspaper printing plant.

Across the top of the sheet is printed a miniature reproduction of the heading of the paper. At top left, is a 48 pt. red and blue American flag; immediately underneath appears a heavy border box (in red) with 19 blue stars representing the number of employees in the service. Underneath this box, set alphabetically in sans serif face, 9 pica measure, is a list of the men in service with rank, outfit and address.

Branches of the service are very well represented among the list of former *Express* employees, including air force, army, marines, and the navy. Commissioned officer, officer candidate, noncommissioned officer and private classifications appear in the list. There is one cadet at West Point Military Academy.

press only because of a change in the form. Using two iron-faced pattern plates 80 percent halftone area, we made 4,000 newspaper mats, on a direct pressure press with no deterioration of quality.

Payments to Printers for Work Done

In meetings of this nature with printers, I have never yet been able to escape a discussion of finances. Someone always brings up the matter of payment for printing performed. In one way or another they say: "When are we going to receive our money?" Attitudes vary from profuse apologies for mentioning our implied oversight, to violent denunciation for our pure cussedness in holding up their funds.

The Government Printing Office does not have any direct appropriation to defray the cost of its operations. An appropriation is made for Congressional printing in the name of the Government Printing Office, but no money can be paid therefrom except for work ordered by Congress. Usually Federal departments and establishments receive their appropriations for printing and binding direct, along with other appropriations for their administration and functional activities. By this arrangement Congress specifically determines how much money each agency should receive for printing and binding. All printing for Federal agencies is performed on the basis of a requisition received in the Government Printing Office. The cost is billed when delivery is accepted by the department. Under the law, if the Government Printing Office is not in a position to perform the printing on a requisition, as you know we can procure such work from qualified printers. In most orders on contract printing the terms require that delivery be made to the place or places designated in the requisition. Upon performing the printing in accordance with the specifications and presenting receipts of consignees acknowledging deliveries, the contractor is entitled to prompt payment from the Government.

The operation of a business of the magnitude of the Government Printing Office takes considerable money. To finance our activities, Congress has loaned us a working fund of $3,000,000. This money must be paid back to the Treasury within 6 months after the close of the year. The amount of the working fund is increased by receipts for printing delivered to departments, and reduced by payments made for materials, labor, and also for printing performed by commercial printers. Thus, we have to collect from the departments what is paid to you.

Delays in payment may be attributed primarily to three causes, and you may be sure insolvency on our part is not one of them. Even with expanding business we so far have been able to secure reimbursement from the departments fast enough to meet our obligations. The time may come, however, when it will be necessary for us to ask Congress to grant an increase in the working fund, which, as I have previously stated, is paid back in full to the Treasury each year. Any delay in the payment of your bills has not been due to the fact we did not have sufficient cash resources, but to some other cause. Please note we cannot make payments until all laws and regulations are complied with, so that the payment will be acceptable to the General Accounting Office.

One of the most common reasons for delayed payment is the unbusinesslike way in which additional charges are billed by printers. In some cases contractors will perform on their own initiative additional operations not covered by the original specifications. Perhaps the operations are necessary, but obviously printers should not undertake them until written authority has been granted by the Director of Purchases. I admit that some of the confusion may be attributable to the Government, as for example where a printer may contact the Washington Office and obtain verbal authority by telephone for an additional operation. If through the pressure of work this authority is not immediately reduced to a supplemental purchase order as should be done, there will ultimately be a delay. Here it is our fault, but the contractor can help by insisting that every verbal instruction involving a change in price be immediately confirmed by a formal written purchase order. If this is done, when your bills are submitted, payment can be made promptly. The money will be in the printer's hands long before it would be if he is indifferent in securing the appropriate formal authority required by the General Accounting Office.

Another cause for delay in making payment is attributable to the lack of information on printers' vouchers. Take for example, the case of accelerated deliveries authorized after the original purchase order has been issued. In planning work we avoid overtime because of the increased cost entailed. Usually sufficient time is allowed for a contractor to perform the job without resorting to overtime. It may sometimes happen, however, that a paper mill or other supplier is unable to deliver the contracted article needed for the work on schedule, in which case it becomes necessary to authorize overtime work by the printer. When this is done, the Government Printing Office issues a supplemental purchase order authorizing overtime work, and agrees to pay the amount of the additional expense incurred by the contractor. In some cases contractors have merely made rough estimates of such cost in round amounts, and in other cases they have undertaken to charge the total paid, that is, the amount for both the basic rate and the overtime penalty, not merely for the overtime payment. In some cases a completely new and unsubstantiated figure is submitted. Such courses of action merely delay payment of bills. Additional charges must be supported by itemization of the additional cost. For this class of transactions we have provided a special form, No. R-2198, similar to that used by other Federal agencies.

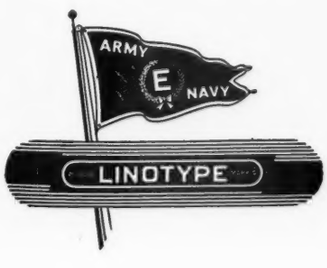
The third cause of delay in payments, inability to secure receipts by printers, is the most common reason. This can, in a large measure, be remedied by the introduction of new methods. The procurement of printing commercially is comparatively a recent arrangement, having been used only in the last year or so on a large scale. The requirements for receipts evidencing delivery has been the cause of worry to many contractors—particularly in those cases where large orders are involved with numerous points of distribution.

(*Continued on Page 43*)

Two-Color Press in the Scrap Heap—President V. R. Lynch of Chicago's Manz Corporation points out a vulnerable spot to Jack Sheldon, WPB field man, on which to apply the sledge. The Business Press Industrial Scrap Committee tells *Printing Equipment Engineer* this 33 T. two-color press is the first of its size to be junked in the Chicago area. In all probability, the threatened after-war obsolescence and exhausted depreciation were not alone responsible for cracking up the press—Government's urgent need for critical scrap metals was the deciding factor.

"You're Keeping Our Business Youthful" Publishers and printers say this to our Linotype Production Engineers who are helping the Press to maintain its composing equipment and methods at customary high standards of production.

With established governmental limitations, the health of the Linotypes of the country—like the health of the Nation—is vital to the success of the war effort.



SINCE LINOTYPE MATRICES are made of brass containing only virgin metals, old brass matrices, rule, etc., should be turned over to the nation's scrap pile via the local metals dealers.

Linotype Granjon and **Garamond Bold No. 3**

WPB *news and notes . . .*

Amends L-244 Magazine Print Paper Order

ON March 26, the War Production Board amended Magazine print paper order L-244 by including alternate provisions for determining paper quotas for publishers of magazines who use not more than 25 tons per calendar quarter. The amended order became effective April 1. The amendment does not further curtail the smaller publisher's quota.

The original order exempted from its restrictions any publisher using 25 tons or less in any calendar quarter. The order amended as of March 26, permits the smaller publisher to use in any calendar quarter after March 31, the larger of two amounts: (1) The amount he used in the corresponding calendar quarter of 1942, or (2) Twenty-five per cent of the amount he used during the year 1942, but in neither case more than 25 tons per quarter.

The amended order also permits any publisher to use in *any* calendar quarter such additional tonnage of paper as he saved in the preceding quarter within the limitation of 25 tons for any calendar quarter.

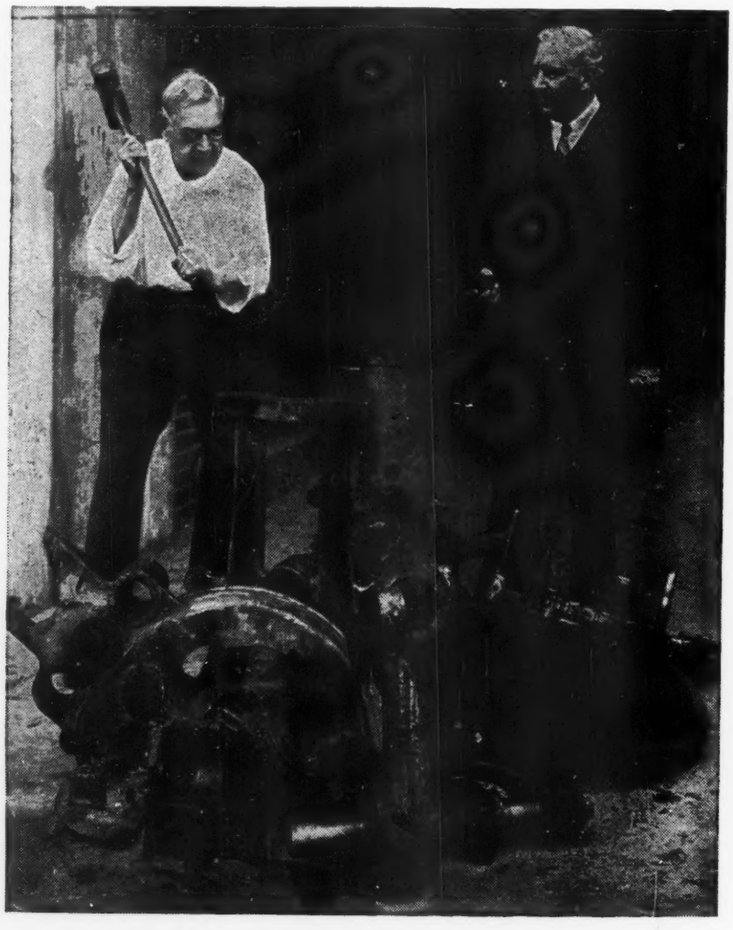
Full text of the amended section of the order is as follows:

(c) *Exceptions.* The restrictions of paragraph (b) hereof shall not apply to any publisher who shall use, after March 31, 1943, 25 tons or less of print paper in any calendar quarter for the printing of his magazine or magazines, provided, that no such publisher shall use, in any calendar quarter, more print paper than the larger of the following amounts (which in no event shall exceed 25 tons):

(1) The amount he used in the corresponding calendar quarter of 1942, or

(2) Twenty-five per cent of the amount he used during the year 1942.

Any such publisher may (within the limitation of 25 tons or less of print paper in any calendar quarter), use in any calendar quarter additional print paper for the printing of his magazine or magazines equivalent to the less-than-quota use of any preceding calendar quarters.



Food Container Machine on the Way—This machine which has had a long and honorable life, is now mingling with important war equipment. Sledge hammer in hand, Elmer Z. Taylor, founder of the first Mono Company over 35 years ago, applies the finishing "touches" to make the machine acceptable for war purposes. Like the father punishing his small son, Mr. Taylor murmured: "This hurts me more than it does you." The Business Press Industrial Scrap Committee reports Mr. Taylor's feelings can hardly be imagined because this was one of the first machines developed by him for the pioneer paper food container industry which he founded.

Non-Essential Uses of Specialty Papers Prohibited

ACCORDING to information released by OWI, non-essential uses of certain specialty papers used in wrapping, specifically glassine, greaseproof and vegetable parchment, were prohibited on March 17 through issuance of General Conservation Order M-286 by the War Production Board. It is estimated that this conservation of material, formerly used largely for transparent decorative wrapping, will effect a saving of from 10,000 to 15,000 tons per year.

Essential uses of this type of paper include packaging of food, ordnance, drugs and health supplies, as well as for tracing papers in industrial plants and for electrical insulation, the Pulp and Paper Division of WPB stated. Only about 15 mills with a total capacity of approximately 140,000 tons a year manufacture these grades of paper.

Prohibited uses include the wrapping or packaging at the point of manufacture or assembly of the following: Woven or knitted textile products and paper products, except when oil-impregnated; metal products, except when oiled, greased or sterilized; wood products, rubber goods and plastic products, except when sterilized, candles and wax products; cosmetics, dentifrices, toilet materials and soap; laundry and dry cleaned products; leather goods and supplies; playing cards, bottled and canned goods, and candy products when used as an overwrap or liner, in conjunction with any other greaseproof, cellophane or similar transparent wrapping material derived from cellulose.

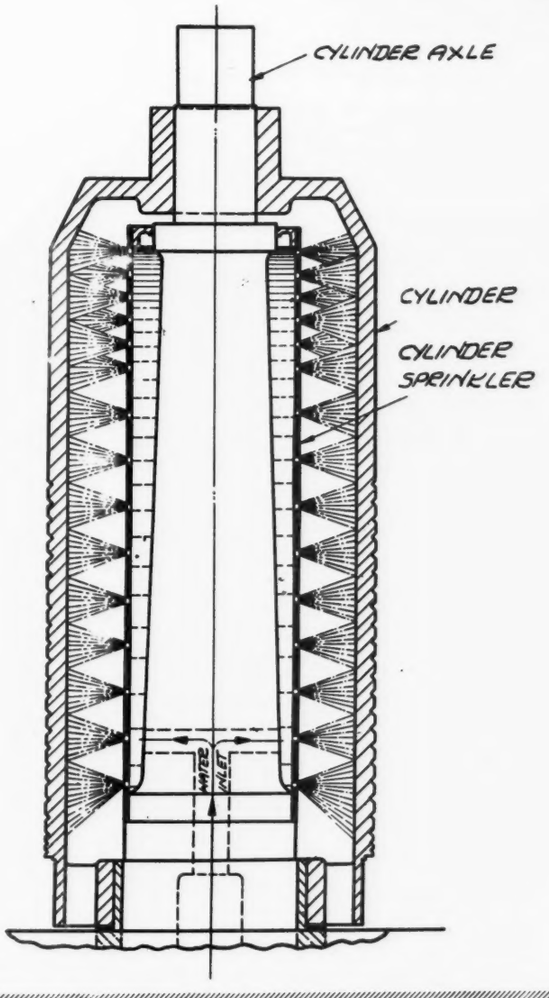
Use of these materials is also prohibited in the manufacture, wrapping or packaging of greeting cards, valentines and novelties, lamp shades, advertising displays, florist supplies, package gift wraps, decorations, toys, games, hair nets, jewelry, brushes and other toilet articles.

Must Deduct Tonnage from Own Paper Quota

UNDER the terms of Limitation Order L-245, it was explained on March 20 in Interpretation No. 1 that a publisher ordering books, or the printing of

Another Maintenance Reminder for Autoplate users...

Wood
NEWSPAPER
MACHINERY



CLEAN HOLES IN CYLINDER SPRINKLER

All water supply sources contain impurities. Sooner or later, these foreign substances will plug up small holes, such as are found in the sprinklers of Automatic and Junior Autoplates. It speaks well for Autoplate design—that they often function with as many as 25% of the sprinkler holes plugged up.

Nevertheless, it is much better practice, to remove the cylinder and clean out the water holes in the cylinder sprinkler. This should be done at least once a year—oftener, if any signs of "hot spots" appear in the plates.

Write the Engineering Dept., at Plainfield, if you need more information on maintenance of any Wood equipment.

(Add this to your file of the current Wood Maintenance Series)

Wood Newspaper Machinery Corporation

Plainfield, New Jersey **New York Office: 501 Fifth Avenue**

books, from a printer must deduct the tonnage of paper used from his own quota. In the interpretation it is stated that a printer who was not a publisher of books during the base period, 1942, has no quota of paper for publishing books in 1943, under the terms of the order.

He is commercially engaged in printing books for the account of book publishers, and consequently the paper he uses for the publisher is charged against the latter's account. Therefore, a "publisher" as defined in the order may not purchase books from a printer for resale unless they are charged to his own quota.

The interpretation points out that the order does not prohibit one publisher from purchasing books from another publisher where such books bear the imprint of the other publisher and where the paper for such books is deducted from the quota of the other publisher.

W. G. Chandler, Director of the Printing and Publishing Division, cautioned, however, that any concerted attempts on the part of the industry or any individual members of the industry to obtain disproportionate advantages under this provision of the order would necessarily lead to a re-examination of the controls established by the order.

Reports Upon Plastic Plate Developments

THAT a considerable quantity of electrolytic copper may be saved for essential war purposes through the increasing use of plastic printing plates, was revealed on March 23 in a study recently conducted by the Conservation Division of the War Production Board for the Printing and Publishing Division. In development for a number of years, plastic plates have been steadily gaining in favor with the printing trades, replacing copper-faced electrotypes as used in certain types of job and magazine printing.

It has been demonstrated that plastic plates are entirely satisfactory for short runs; that is, up to 50,000 impressions from flat plates as used in form printing. It is therefore reasonable to assume that this will also hold true for book work in those cases where a greater number of impressions is not required. As experience in the manufacture and use of plastic plates is gained, longer runs will become possible, the study predicts. Tests are now being conducted to determine the extent to which plastic materials can be used to make curved plates for running on rotary presses.

Plastic plates have also proved successful for use in the production of dry stereotypers' mats as employed in the mechanical departments of many newspapers and elsewhere. The American Newspaper Publishers Association recently published a study on this matter, the Conservation Division points out.

Plastic plates are comparatively light in weight, about one-eighth as heavy as a similar size electrotype. When it is considered that the duplicate plastic plates, from which stereotypers' mats are made, must often be shipped great distances, the saving in shipping weight is definitely worth while.

The United States Government Printing Office both makes and uses plastic plates and also purchases plates from outside sources. Some private printing establishments make their own plastic plates. There are well established commercial plate makers in New York, Illinois, Ohio, Alabama, Michigan, Tennessee and Wisconsin who can make them, and plants in other parts of the country are readily convertible to the process.

The plastic plate is a duplicate plate, like a stereotype or electrotype. An original such as a copper or zinc photo-engraving, a line cut or a type form is therefore necessary from which to do the molding.

To make a plastic plate, a plastic matrix is first molded from the original. The process is similar to that of pressing a seal or signet ring into sealing wax. Copies of the plastic plate, from which printing is actually done or stereotype mats made, are then struck off the matrix in any quantity desired.

A further advantage of these plates lies in the fact that the material of which they are made can be reclaimed by the plastic composition manufacturer, after the plates have served their purpose. Loss of material can therefore be kept to a minimum once the necessary amount of plastic raw material has been put into use as printing plates.

Thermoplastics Order M-154 Revised

THE list of civilian products for which thermoplastics may no longer be used was revised on March 26 by the War Production Board through issuance of General Preference Order M-154 as amended in its entirety.

Restricted items are listed in Exhibit A attached to the amended order. Use in the manufacture of any unrestricted item of more thermoplastics than are necessary to accomplish the item's functional purpose is prohibited. Use of thermoplastics in the manufacture of decorative attachments for any article is also forbidden.

An exemption is provided which allows use by any person of thermoplastics in his possession prior to the restriction date to make any restricted article. Any person may also use thermoplastics in the possession of his supplier that have been processed prior to the restriction date in such a manner that they cannot be used for unrestricted articles.

Exemption is also granted on specified uses for the Army, Navy, Coast Guard, Maritime Commission or War Shipping Administration.

Thermoplastics are defined as the following synthetic resins and cellulose derivatives; cellulose acetate, cellulose acetate butyrate, plasticized cellulose nitrate, plasticized ethyl cellulose and polymers and copolymers of styrene. Exceptions from the definition are plasticized cellulose nitrate used in explosives and protective coatings and also styrene copolymerized with butadiene.

Furniture, furniture parts and upholstery except seat coverings for public transportation (war use exempted), glass "shatterproofing" treatment except laminated safety glass, handbag frames, handle knobs for doors and frames (war use exempted), house address numbers, ice cube trays, jewelry and ornaments including hand fabricated jewelry, lamp cord protectors, lamp shades and bases except industrial and office (war use exempted), laminations and covers to photographs and pictures (war use exempted), magnifying lenses (war use exempted), nonprofessional medical instruments (throat lights, tongue depressors), pharmaceutical pill tablet and capsule trays, phonograph or auto radio receivers and parts (war use exempted), photographic equipment and supplies (war use exempted), pistol grips and rifle butts except for governmental use.

Pocket and scout knives (war use exempted), poker chip holders, protective envelopes and laminations to paper for other than documents, permanent records, blueprints and industrial charts (war use exempted), scales except for industrial and commercial use (war use exempted), sewing thread spoolholders, shaving brush containers (war use exempted), ski goggles (war use exempted), sleeve protectors, cigarette lighters, cigarette lighter flint containers, soap containers (war use exempted), envelope openers, stationery moisture applicators except sealing tape machines, paper clips, pan bases and holders, pencil sharpeners, rulers but not including edge strips for rulers, stapling machines, sun goggles except for use with corrective lenses (war use exempted), syrup dispensers, tableware: cups, saucers, plates, tumblers, knives, forks, spoons except handles for knives, forks, spoons (war use exempted), toothbrush containers (war use exempted) vending machines and parts, visors except industrial (war use exempted), wall shields.

In Exhibit A of amended order M-154 are listed many articles which are prohibited for use in the manufacture of products of direct interest to the printing industry are the following:

Item:	Effective date of restriction
Advertising and miscellaneous novelties	9/ 1/1942
*Badges, emblems and campaign buttons, except personal identification required governmental and industrial use; tags and badges required by state and municipal governments and public safety personnel of the latter.	1/ 9/1943
Book covers and book marks	3/26/1943
Calendar holders	3/26/1943
Calendars	1/ 9/1943
Calling card cases	3/26/1943
Displays, including but not limited to advertising printing, containers and packages including all transparent boxes and food covers	9/ 1/1942
Greeting cards and components	1/ 9/1943
*Handles for carpenter tools, except screw drivers and chisels	9/ 1/1942
Plastic bookbinding — comb or spiral type for advertising, promotional, premium, recreational or novelty products	1/ 9/1943
*Playing cards	1/ 9/1943
*Protective envelopes and laminations to paper for other than documents, permanent records, blueprints and industrial charts.	3/26/1943
Stationery supplies—Stapling machines	3/26/1943

* Subject to war use exemption.

Minimize

PRESS BREAKDOWN POSSIBILITIES

THE PRESS and stereotype equipment now being operated in your plant must last for the duration. Duplex is still able to furnish any repair or replacement parts on short notice.

AS A SAFETY MEASURE we suggest that a close check on all equipment be made daily by the mechanics in your employ. If they are skeptical of the condition of any piece of equipment, call one of our service department engineers to your plant immediately. Prompt attention may forestall a serious breakdown.

THE DUPLEX SERVICE DEPARTMENT operates twenty-four hours per day, seven days a week. If in need of the services of a highly trained mechanical engineer to assist in overcoming pressroom or stereotype difficulties, or for emergency repair jobs, contact us immediately and everything possible will be done to assist you.

THE DUPLEX PRINTING PRESS CO.

BATTLE CREEK, MICHIGAN

Craftsmanship—*its potentialities as discussed in relationship to printing plant executives—Finding time enough in which to think—Keeping up with new ideas—Preparing yourself for the opportunity*

By C. FRANK MANN*

*Composing Room Superintendent, Louisville (Ky.) *Courier-Journal* and *Times* and Past President Louisville Craftsmen's Club—Abstract of address given before a meeting of the Louisville Club of Printing House Craftsmen.

MY subject is one that could hardly be discussed before a group of fellow Craftsmen without introducing personal experiences. I shall, however, relate these experiences humbly with the desire only to touch upon advantages and opportunities that always face those of us who try to be alert. Craftsmanship is hard to define. To many, it simply means good work. But there is some relation between a craftsman and the end-use of the product he is fashioning. A good craftsman puts *use* and *service* into his work.

Recently a local man had occasion to order a specially-built truck body. Because he wanted something good, he went to a fine old craftsman who had many years of experience in making bodies. He gave strict dimensions and specifications and waited delivery eagerly. The creation was not only out of all proportion but unsuited to the purpose for which it was to be used. There was nothing to do but pay off and start over. The purchaser admitted it was strictly according to specifications. The maker confessed that the plans had looked queer to him but that he had not been asked or encouraged to give suggestions. "I want a body that will do this and this," was the new order. And the chances are that when finished, it will get the job done.

Working with printers' type year after year and studying it, gives the careful compositor a craftsmanship feel that goes beyond the mere filling up of space.

Craftsmanship Defined

A Craftsman's Club is an organization of practical men engaged in the allied industries of the Graphic Arts, who are sincerely interested in their individual progress and the technical advancement of the Graphic Arts Industries in general. It is a voluntary organization in which many individuals share a part of their time, a part of their knowledge, a part of their skill—an organization in which the ability of each is at the service of all. By reason of their mutual interests, influence in matters of industrial scope is possible which ordinarily no individual would attempt and in which, even if attempted, he would not succeed.

Through the bonds of friendship created in the club, Craftsmen always assist each other in every reasonable difficulty. It has ever been the way of a man to favor his friends. Men who know each other usually like each other. Men who like each other try to understand each other. They may disagree but not with rancor; they may think differently but they always act tolerantly. Some of the finest and truest friendships have had their foundation in an acquaintanceship made in a Craftsman's Club.

Old customs and old habits must necessarily yield to more modern methods that are designed to meet present economic conditions and to take care of the future. The satisfaction which an inventor may have taken in seeing new forces set in motion by the craft to which his genius gave birth may well have compensated him for the lack of reward in what the world counts as riches. Thus it is not always a fact that our time and efforts bring us personal rewards in a financial manner. Many good craftsmen die poor.

Well Planned Room Appreciated

I have learned through a few years of experience that printers appreciate a well planned room in which to work. Every piece of equipment in our composing room has been placed to save steps. The whole room is carefully coordinated to permit copy to start at a given point and go through all production procedure until the type reaches the makeup line.

Some composing room executives have found it expedient to maintain a department for handling the ads and in some instances have completely divorced it from the news side, insofar as the machine equipment is concerned. We publish six morning editions, six afternoon editions and eight Sunday editions. Four of our 30 line-casting machines are used for heads and display. We have 19 four-magazine and 7 three-magazine machines making it possible to set the straight matter at edition time and use the whole battery on advertising composition when the volume runs heavy. At these times, it reaches as high as 300 columns a shift during busy seasons.

It is the policy of our management to keep all of the equipment in first class running order to permit craftsmen every advantage in producing the very best newspaper. This policy has been helpful in meeting production potentials.

Time is the contract binding all the mechanical operations of the newspaper. Extra time and lost time mean rising costs. In view of the rising cost of time it is essential that a proper value should be placed upon it. Given capable and conscientious craftsmen, it is necessary only to determine more workable physical conditions and establish more orderly processes to make possible the realization of acceptable unit standards of production. The greatest measure of progress is achieved through inspiring craftsmen to think and encouraging initiative in them by adopting constructive and helpful suggestions.

Time In Which To Think

Some time ago I said to my boss, who was breaking me in to take his job, "Don't you get awfully tired killing time?" He answered rather sarcastically, "No, I do not find enough time to think." It was rather difficult for me, after having been trained in actual production and knowing my limitations, to visualize putting in a whole day thinking. However, it did not take long for me to learn that time to think meant new discoveries, and a chance to excell in problems pertaining to composing room production.

Since that time and until this very moment, the needs of composing room executives have haunted me. That exciting word *think* has been bobbing up until I am sometimes of the opinion that perhaps it would be a good idea for some of us to do a lot more thinking.

I exhausted a lot of energy in trying to get the editorial department to refrain from "trick" composition in our newspapers. My efforts were successful in eliminating all initial letters, and limiting two-column and various measure matter to time copy. Many other things were accomplished by *thinking* that would and did cut our composing room cost.

Then, we got a new general manager. He wanted a modern newspaper and changes in typographical makeup were inaugurated. He put in the makeup from dummy system, whereby the editorial department sends dummies of each page to the composing room and the type and

Iowa Conference Postponed

In a letter received from President Chas. H. Bleuer, *Printing Equipment Engineer* is informed that the Board of Directors has decided to postpone the 1943 meeting of the Iowa Daily Newspaper Mechanical Conference. The conference was to have been held in Des Moines in May.

Prime motivating reasons for postponing the meeting are shortage of help and difficulty in travel. The action was taken in response to ODT Administrator Eastman's request that all meetings not contributing directly to either winning or shortening the war be cancelled.

No announcement has been made as to when the conferences will be resumed.

OFFICIAL U. S. NAVY PHOTOGRAPH

THAT murderous broadside from American guns dealt the enemy not one but two shattering blows—*and the second, struck by our newspapers, was a far heavier smash than the first!*

Powerful combat pictures . . . printed in newspapers reaching every war-working American . . . send war output zooming on thousands of production lines. Guns, planes, bombs, tanks, ships pour forth even faster when workers *SEE what their work means in action.*

More and better WAR NEWS-PICTURES are essential to more and better WAR PRODUCTION . . . yes, even to Victory itself!

Victory-minded publishers increasingly play up combat news *pictorially.* Increasingly, too, they print the *clearer, sharper, more compelling halftones* these pictures demand, with inks that do that job best—MORRILL NEWS INKS—the finer inks that print America's greatest newspaper circulations.

For Victory, print more and better war pictures — and print them with MORRILL NEWS INKS for brilliant reproduction, trouble-free performance, real economy.

★ ★ ★ ★ ★

More and better
WAR NEWS-PICTURES
MEAN
More and better
WAR PRODUCTION

WAR-WINNING POWER —AMERICA'S PRESS

America is newspaper-minded, and what Americans think and do depends primarily on what they "SEE in the papers". More than 30 Government Victory Projects—including War Bonds, Civilian Defense, Scrap Drives, Rationing, Car Pooling, *and especially War Production* — would fail without the support of our press, aid priceless yet largely cost-free.*** For Victory, print more and better War Pictures, today and every day!

News Inks by
THE WORLD'S LARGEST MAKER
MORRILL

GEO. H. MORRILL CO.
DIVISION
GENERAL PRINTING INK CORPORATION
100 SIXTH AVENUE • NEW YORK, N. Y.
FACTORIES
NORWOOD, MASS. • TACONY, PHILA., PA.
CHICAGO, ILL. • SAN FRANCISCO, CAL.
BRANCHES
BOSTON • NEW YORK • PHILADELPHIA • DETROIT
CHICAGO • ST LOUIS • MINNEAPOLIS • FT. WORTH
LOS ANGELES • SAN FRANCISCO • SEATTLE

heads are composed to fit planned layouts. Facing pages are planned to be different—all sorts of various measures—10-point leads galore, heads set to fit holes, reset in later editions—30% of the type was set indented each side, which, of course, slowed up production on straight matter machines—in short, a magazine-style newspaper and no more time in which to produce it.

Keeping Up With New Ideas

That is when we really had to begin thinking.We could no longer say it can't be done. We could not suggest that our equipment would not permit this sort of composition because we were immediately told to purchase the necessary equipment. For a while, however, that made matters no better, because printers must have time to master new equipment. We had to think and think fast in attempting to keep up with the ideas of our new management.

We found a way to set news matter indented each side with no added expense, together with making our 4 pt. column rule appear as a 6-pt. column rule. A careful study of production problems showed us the way to put in initials, use 10 pt. leads and give the editorial department any width type together with the kind of head, reset in all editions without increasing the unit cost.

There never was a time like the present to tax the ingenuity of craftsmen who are on the production line. We are being called on daily to fashion our production after the necessities handed down by initialed boards. I shall not discuss the war effort because I know that everyone listening to me is doing and will continue to do all that is asked and more to win the war. Our kind of craftsmanship is founded on an all-out effort to succeed.

I have tried to define craftsmanship but have said little about its potentialities. Perhaps my crude definition of the first takes care of the latter, but I would like to make another personal observation.

The craftsman that invests twenty-five or thirty dollars per year belonging to a Craftsmen's Club, subscribing to and reading the best printers' literature—thus becoming, day by day, a better Craftsman—is just plain smart. If an ordinary printer would use the above suggested amount each year for ten years, plus a lot of his own time, and because of the effort, earn an extra thousand dollars per year for the next twenty years, wouldn't that be the smart thing to do? But you say, "There might not be a chance for me to do this." Certainly, the man that gets the good job will be ready to take it when it is open.

In the twenty-five years that I have been employed on the local newspapers I have witnessed a number of changes in executive personnel—four superintendents and eight foremen in the stereotype department; five superintendents and eight foremen in the pressroom; eight superintendents and twelve foremen in the composing room. These are the top jobs. Every change at the top means a number of promotions down through to the last assistant and into the ranks. No chance for me—take the time to study the local changes that have been made during the last few years. Look at the 1936 roster of the Louisville Club's active membership list. you will find that nineteen major changes have been made—each of the nineteen changes meant one or more promotions—in the short space of six years. What are we doing to make ourselves available to step up when the next change is made?

I was a foreman under a superintendent that was in his fifties. I argued that he would hold on until he was seventy-five at which time I would be entirely too old to be considered for advancement. But that did not stop my preparation. He became totally incapacitated almost over night and I got the job. Promote yourself by getting ready.

TECHNICAL LITERATURE

Production and Mechanical Executives wishing to secure copies of the literature described below may do so by addressing the manufacturer direct, or by sending request to Printing Equipment Engineer.

Color Standards

An 8 page folder entitled Color Standards has been published by General Printing Ink Corporation. It contains a check list (each described briefly) of 34 color standards and color systems used in American industry and science. The data contained in the folder should be valuable as a permanent record and for reference purposes.

Electric Motors are the Muscles of Your Plant

THE Safety Research Institute, New York, has prepared a list of ten commandments for motor maintenance. While printing plant executives are more or less familiar with efficient motor maintenance, we are printing the commandments so that these executives can review the suggestions issued by the Safety Research Institute because some new detail in motor care may be revealed.

In addition to preparing the suggestions for good motor maintenance, the Safety Research Institute makes it plain that shops in which motors are used should always be protected with suitable types of fire extinguishers. Vaporizing liquid and carbon dioxide are suitable for this purpose since their contents are non-conducting and will not cause corrosion or otherwise damage motors.

I. Open-type motors should be blown out weekly; those operating under severe conditions, daily. Use no more than fifty pounds of pressure to avoid possible damage to insulation.

II. Follow manufacturer's instructions in lubricating motors. Too much oil is as bad as too little, causing deterioration of insulation.

III. Inspect bearings weekly or oftener. Feel temperatures, examine for excessive end play, and make certain oil rings are working.

IV. Inspect brushes and commutators weekly or oftener. Make certain brushes are seated perfectly and commutators are smooth. Use proper grade of carbon brushes to prevent wear of commutator and reduce sparking.

V. Where motors operate with excessive belt tension, check the air gap between rotor and stator every week. A monthly check of motors in average use is sufficient. Difference in the width of the gap around the circumference of the rotor will indicate extent of wear on bearings.

VI. Where motor leads are exposed to view, check them weekly to see that connections are tight, well insulated and protected, and free from oil.

VII. Inspect ground connections weekly, keeping them tight and in good condition. This is for the protection of employees, and for the proper operation of over-current protective devices.

VIII. Set up a regular schedule for overhauling motors. Most motors should be overhauled annually, while those in severe use should be overhauled twice a year or oftener.

IX. Dismantle the motor for a complete overhaul job. Wash all parts with carbon tetrachloride or some other safety solvent. Paint the windings with a good, oil-resisting insulating varnish.

X. Keep the area around the motor as clean as the motor. Arcing frequently ignites oily material that has not been cleaned up.

When fire breaks out in or around a motor, shut off the power before attacking the flames, if possible. Do not depend upon the circuit breaker operating or a fuse blowing out, but shut off the power. This will minimize damage to the motor and prevent continued arcing from re-igniting the fire. When the motor or conductors are dead, direct the fire extinguishing agent into the motor or upon whatever is burning, just as in any other fire. As soon as the fire is out, ventilate the area thoroughly to clear out smoke and fire gases.

Printing Patents—*Toland-Bassist offset-lith paper plate and plate-making methods — Safety ink for checks — Novel doctor blade for rotogravure cylinder — Report covers patents issued Feb. 23 to Mar. 23*

This data is compiled exclusively for *Printing Equipment Engineer* by Invention, Inc., is verified in the United States Patent Office, and is comprehensive of all patents in the field of each heading for the dates specified.

For copies of patents listed here, specify the patent numbers and send 10c for each separate patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Binding, Cutting, Perforating:

2,314,087. METHOD OF REINFORCING THE BINDING OF PAGES or covers of magazines by strengthening the sheets of paper at their area of engagement with the staples which hold them together. A reinforcing coating of a thermoplastic or highly volatile material, such as celloidin in an alcohol ether mixture, is printed at spaced intervals upon the traveling web of paper conforming to the eventual folding lines. The coating dries rapidly to permit immediate printing. The reinforced coated areas of the folded sheets are superimposed so that staples may be passed through the reinforced areas along the fold lines and thereby more securely hold the pages in place. Invented by George Heller, Englewood, N. J. Assigned one-half to Henry M. Herbener, Thomasville, Ga. Application November 10, 1941. 10 claims.

2,314,088. MAGAZINE WITH REINFORCED BINDING produced by the method described in patent 2,314,087, above, whereby the cover and pairs of inner leaves are less likely to pull apart from the other pages because of increased strength of the paper immediately adjacent the binding staples. Invented by George Heller, Englewood, N. J. Assigned one-half to Henry M. Herbener, Thomasville, Ga. Original application November 10, 1941. Divided and this application June 13, 1942. 10 claims.

Composing Room Equipment:

2,314,272. APPARATUS FOR PHOTOGRAPHICALLY REPRODUCING DISPLAY TYPE LINES, having a novel flexible mirror construction for reflecting the line of type from a composing board to the camera. The mirror is supported in a frame which maintains the center of the mirror fixed but which is capable of moving the edges of the mirror to vary it from a plano surface to a concave and also to a convex surface. By this means alterations and variations in the character, size, shape and style of the letters of the type line may be reflected to the camera. Thus, a great number of lengthened, shortened, slanted, back-slanted and otherwise altered prints may be made from one original setting of a complete type line on the copy board. Invented by Louis Grudin, New York, N. Y. Unassigned. Application January 24, 1941. 15 claims.

2,314,324. TYPOGRAPHICAL COMPOSING MACHINE of the type equipped with a column of superposed magazines which are shiftable fore and aft as a unit in the machine frame in order to bring one or another magazine, or different pairs thereof, into operative relation with the matrix assembling and distributing devices. Invention provides a brake mechanism which is operative first to check the momentum of parts involved in the magazine shifting operation and then to arrest the shifting movement by action either directly or indirectly on the column of magazines or the shifting devices or both as a desired magazine approaches proper registration with its assembling and distributing devices. Purpose is to avoid any tendency toward over-drive or over-run of the column of magazines due to momentum induced by shifting and-or to unbalanced conditions arising from change of load or inclination of the surfaces on which the column of magazines is supported in the machine. Invented by George W. Allen and Albert H. Simpson, Brooklyn, N. Y. Assigned to Intertype Corp., Brooklyn, N. Y. Application January 31, 1942. 31 claims.

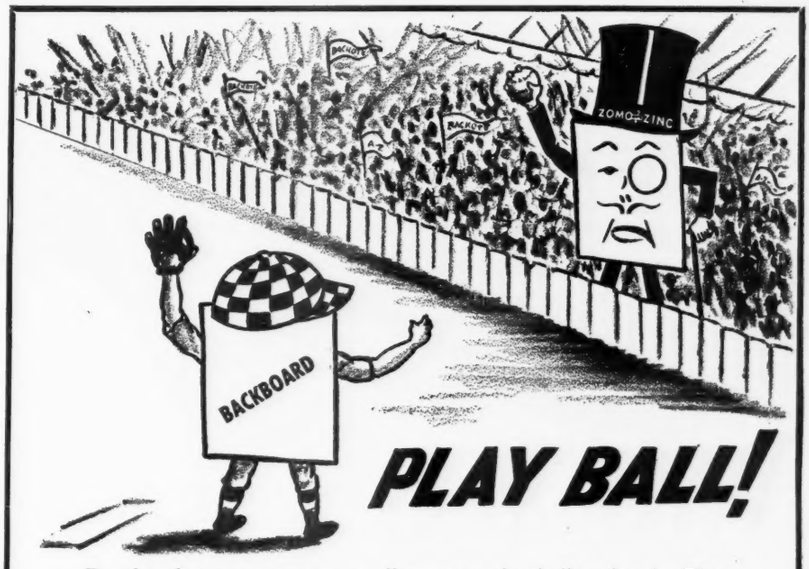
2,314,536. TYPOGRAPHICAL COMPOSING MACHINE wherein smoothness, accuracy and speed of assembly of lines are improved by directing the lower ends of the gravitating spacebands to a common point on the inclined surface of the buffer finger. They are compelled to lodge at this point and to remain in a true vertical posture without swinging motion as they settle in front of the star wheel and when struck by an oncoming matrix. For this purpose, invention provides a sharply inclined surface associated with the finger and so disposed as to present an abrupt rise to the right from a point in the upper edge of the finger substantially in vertical alignment with the entrance end of the line assembling channel, that is, the position in the channel where the upper end of a spaceband upon its arrival in the line lies adjacent to the blades of the rotating star wheel. Invented by Frederick D. George, Sacramento, Calif. Assigned to Intertype Corp., Brooklyn, N. Y. Application September 23, 1941. 14 claims.

2,314,768. LINOTYPE MACHINE of the type known as "model 9" wherein a series of superposed magazines are mounted in a fixed supporting frame and wherein the assembling mechanism includes a vertically adjustable throat which may be brought into operative relation with any selected magazine by operating a hand lever located adjacent the keyboard. Invention provides an arrangement whereby the uppermost magazine of the series may be easily removed for interchange by the operator of the machine without the aid of a skilled mechanic. This particular magazine is supported in a subsidiary frame which overlies the magazine and which is movable upwardly to carry the magazine to a position where it may be removed without disturbing the assembling mechanism. To permit its removal, the magazine is slidably mounted in its supporting frame and is held positioned therein by a latch bar which is easily accessible when the magazine is raised. Invented by Harold A. Burt, St. Albans, N. Y. Assigned to Mergenthaler Linotype Co., Brooklyn, N. Y. Application January 8, 1942. 26 claims.

Feeding, Folding, Delivery:

2,311,626. TIMING DEVICE particularly adapted for use with web-roll changing apparatus for a printing press. Its exemplified use is in joining the web of a replacement roll with that of an expiring roll. One spindle of each arm of a three-arm paper reel is provided with a permanent magnet which closes two electrical contacts when the magnet is in position and when a "Paster" button is pressed by the operator. The electric circuit thus formed operates a valve which sprays a line of solvent onto a revolving replacement roll at exactly the line where there is a dry adhesive substance, thus wetting the adhesive and preparing the

(*Continued on Page 45*)



For the photo-engravers, who all want to play ball under the Zinc Conservation Program, Zomo Electric Zinc and A-Z Alloy are available in standard sizes in the regular 16 gauge, and to increase surface area per pound, they are also available in the thinner gauges, 18 gauge (.049" thick), 21 gauge (.032" thick).

The new star — Backboard

To bring these thinner sheets up to the regular 16 gauge thickness, a new star has been added to the line-up — Backboard which is made .015" thick to back up .049" zinc, and .032" thick to back up .032" zinc.

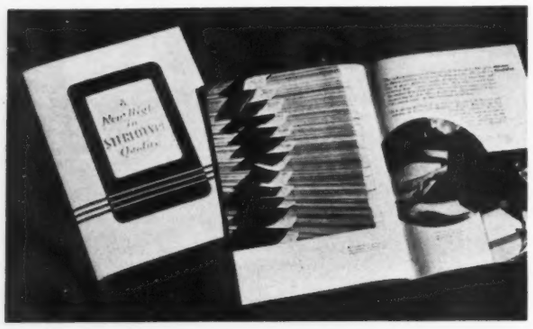
Backboard has been developed to meet the special requirements of photo-engravers. The definite advantages which it has over the usual types of pressboard now available are as follows:

1. It tools without leaving a burr or burning the tool.
2. It does not lose thickness under pressure.
3. It is of even thickness all over every board.
4. It will withstand immersion in water without swelling or softening.

You can order any or all of the above products from leading metal suppliers in United States and Canada. Note: Backote is supplied with all three gauges and with a distinguishing color for 18 gauge.

ZOMO ELECTRIC ZINC A-Z ELECTRIC ALLOY

Equipment and Supplies



Miniature reproduction of cover and inside spread of booklet announcing Burgess's Supreme Tone-Tex stereotype mat for fine screen printing.

New Mat for Fine Screen Stereos

The Burgess Cellulose Company recently announced development of a new commercial stereotype mat which has been named Supreme Tone-Tex. The new mat was developed to help relieve the present stringency caused by WPB on copper for duplicate printing plates.

Manufacturer claims that this mat makes it possible to obtain good reproductions of even 133 line screen halftones from stereotypes, as well as faithful reproductions from halftones of coarser screens.

As an example of the printing obtainable from stereotypes cast from these mats, Burgess has recently released to the trade a 16-page booklet printed entirely from stereotypes. This booklet tells in some detail the story of the development of Burgess Mats. It includes many illustrations of views from the Burgess Plant, all of which are reproduced by stereotypes of 133 line screen halftones.

Copies of this booklet are available upon request to Burgess Cellulose Co., Freeport, Ill.

Combines Variable Speed Mechanism and Gear Reducer in Single Unit

A new unit in variable speed control equipment built by Reeves Pulley Co., is the Reeves Reducer-Type Transmission. This drive, consisting of the standard Reeves Variable Speed Transmission with built-in Speed Reducer, according to manufacturer, has been developed to meet requirements for accurate speed control and speed reduction combined in one enclosed unit. Less mounting space is needed with this drive to obtain the lower range of speeds which formerly required the use of auxiliary speed reducing equipment.

The Reeves Reducer-Type Transmission is available in horizontal and vertical design which may be mounted in any position. Each design is available in a wide range of speeds and in capacities from 1 h.p. to 7½ h.p. inc. The Transmission in various sizes produces ratios of speed variation from 2:1 through 12:1 and the reduction gears provide ratios up to and including 6.9:1. Speed changes are affected by turning a handwheel or, if completely automatic regulation is desired, it is available by mechanical or hydraulic methods.

The reduction gears are mounted on the variable shaft of the Transmission, this shaft serving as the input shaft for the reducer unit. The assembly of the reducer unit may be made in many different positions.

Reducer-Type Transmission equipped with adjustable motor base which accommodates any standard constant speed motor for individual drive.

The gear reduction unit, which is built integral with the transmission, has been developed for the severe torque demands of variable speed service. Allowance has been made in size for overload in starting and momentary peak loads. The shafts of the reducer, proper, are mounted on heavy duty ball radial bearings and are manufactured from high carbon steel.

The helical type of gear reducer has been adopted because of established high efficiency and quiet operation. Since the teeth of a helical gear are cut at an angle to the axis, two or more teeth are in contact across the face of the gear at all times, this providing smoother transmission of gear load from one tooth to the next, producing better load distribution and improving the wearing properties of the gear. All rotating parts in the reducer are splash lubricated. Three oil plugs are provided, one for determining the oil level, one for filling and one for draining the oil.

The Reeves Reducer-Type Transmission in either horizontal or vertical design may be equipped for individual motor drive by use of a Reeves motor base. The motor mounting is directly above the transmission, the motor base being attached to the top of the transmission frame. This base is universally adjustable to accommodate any standard make of motor of the correct horsepower capacities for any given size of Reeves Reducer-Type Transmission. Connection between motor and constant speed shaft of the Reeves drive may be either silent or roller chain and sprockets, multiple V-belts or pinion and gear.

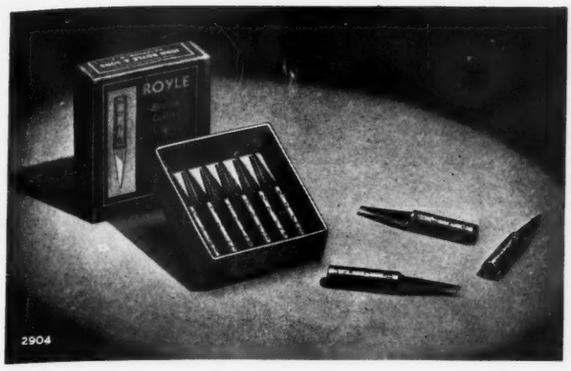
Fireproof Oil-Absorbent Sweeping Compound

Fibre-Tex is the name of a floor cleaning compound which is said by its manufacturer Lacey-Webber Co., to eliminate any danger of fire through its use. The product is said not to burn even when the flame of a blow-torch is played directly upon it, nor as the result of spontaneous combustion.

The flame of a blow-torch is claimed not to ignite Fibre-Tex sweeping compound.

It is also claimed for Fibre-Tex that it is highly absorbent of oils and grease and has an active cleaning effect upon floors on which it is consistently applied. Grease and oil-caked dirt are said to be removed; safety stripes and other floor markings made plainer and, in general, plant housekeeping greatly improved.

Now that time enough has elapsed to test their value, many mechanical and production executives who have devised successful alternative methods in their plants under war conditions can inform others about these production helps. Readers of *Printing Equipment Engineer* will be glad to have you show them how you have helped yourself overcome one or more problems.



ROUTING CUTTERS THAT CUT!!

Choose Style According to Use

Styles	*Blade Sections*	*Recommended for*
A		Electrotypes, stereotypes, wood
B		Zinc
C		Brass
D		Electrotypes and copper
E		Copper (Steel at reduced speed)
F		Zinc (Reinforced blade)
G		Brass (Reinforced blade)
H		Copper (Ground below center)
L		Zinc (Long blade)
M		Wood veining (No taper)

All Royle Routing Cutters reflect advantages gained through more than eighty years' experience in making these tools. We promise no miracles, but offer a complete line of cutters in every respect the finest that sound design, fine material and expert workmanship can produce. ***Order Direct Or Through Your Dealer . . . Be Sure It's a Royle.***

Write for catalogue 425

ROUTERS · TRIMMERS
BEVELERS · SAWS

JOHN ROYLE & SONS

8 ESSEX STREET PATERSON, N. J.

Pleasant Collecting trips mean much to

BOY POWER

★ There's a boy-power problem in many newspaper circulation departments. . . . Younger lads, new to responsibility, are trying to carry on. . . . They need every aid to punctuality that the paper can give them.

★ Week-end collecting trips tell the story. It is then that the boy garners smiles or runs a gantlet of complaints. . . . Maybe he, himself, has slipped. Maybe difficulties in the plant have sent him off to too many bad starts.

★ Pleasant words from housewives mean happy, satisfied carriers. . . . Too many frowns and the route needs a new boy. . . . So the press hour precision, in which Certified Mats help so much, has a powerful effect in solving Boy-power problems.

Certified field men are always available for consultation on mat questions.

CERTIFIED DRY MAT CORPORATION
9 Rockefeller Plaza, Dept. M New York, N. Y.

Certified
DRY MATS

THE FOREMAN

— *His place in the Safety Program*

By H. W. HEINRICH*

*The Travelers Insurance Company. Abstract of address delivered before the National Safety Council's 31st annual safety congress, *Safety in Foremanship* Section.

FOREMEN are getting "fed up" on repeated assertions that they are responsible for the safety of their men and that they should accept responsibility and act on it in an authoritative way. They are fed up and a bit irritated, not at all because they disagree, but because they feel that a burden is being shoved on their shoulders without helpful suggestions as to *how best* the job can be done.

By no means should these excuses be viewed wholly as evidence of improper foreman attitude. Rather, they should be accepted as clues to the solving of a troublesome problem — as indications that the foreman will appreciate and profit by common-sense, friendly, and constructive advice from the executives to whom he makes the excuses.

In other words—when a foreman says that the injured employee violated instructions which had been given him repeatedly, he is not necessarily offering an alibi nor is he implying that he senses no responsibility other than to give instruction. What he does mean to convey could be expressed more clearly by such questions as follows:

Does management really expect me to push this safety business just as much as quality and quantity of production?

I don't quite understand what more I could do than to instruct the man. What would you suggest?

What am I supposed to do in a case of this kind?

How would you go about the job of drilling "safety consciousness" into the heads of employees whom you have no chance to talk to oftener than once or twice a week?

Let's accept these excuses as *Opportunities* for helpful cooperation. Let's identify them—see what lies back of them—accept as a fact that foremen in general know their stuff—sense their responsibilities—are eager to do their part and are already doing a grand job *but* with regard to control of men for *safety*, just don't know how to go about the work, in many cases.

Here is a list of excuses commonly given by foremen when they are asked to explain the circumstances of an accident that occurred because one of their men violated a safe-practice rule; also an accompanying list of answers:

Reasons Given by Foremen for Lack of Success in the Enforcement of Safe-Practice Rules

Reason—Can't stand over each individual workman continuously.

Answer—Don't need to. Workmen violate the same safe-practice rule on the average of 300 times before they are hurt. You should be able to see at least a few of these violations and take executive remedial measures at that time.

Reason—Have warned men repeatedly.

Answer—Evidently your warnings were not sufficiently impressive. Management expects foremen to know how to handle men and to get results. It is not enough merely to warn them.

Reason—The men complain that goggles and other items of safety apparel are uncomfortable—don't fit, etc.

Answer—The complaints of men, whether they relate to safety apparel or to production rules, should be run down to earth. If the complaints have no sound foundation, they should be ignored and the usual supervisory procedures applied to obtain compliance with rules. If the complaints are soundly based, then there is something the matter with the safety equipment, and again it is the foreman's

What the dial did for the telephone

Teletypesetter will do for composing machines

[when the war is won]

THE telephone was always a marvelous instrument, yet the dial system made it more accurate, more efficient. And that's what Teletypesetter does too!

When added to composing machines, it has often stepped up their output 50% to 100% . . . not through high speed but through steady operation with practically no delays from mat jamming and distributor stops.

Today war work has deferred the production of Teletypesetter equipment. But after Victory, it can give *your* composing machines new speed and efficiency.

TELETYPESETTER CORPORATION, Chicago, Illinois.

TELETYPESETTER
REG. U. S. PAT. OFFICE

The
MEN WHO MAKE
VULCAN ROLLERS
Ask You to Conserve Them

"Over here at Vulcan we're turning on the heat to produce more war materials. At the same time we feel pretty good about those extra-special rollers we were making until lately. Guess it's one of those pride of craft affairs.

"So if it isn't asking too much, will you take care of your Vulcan rollers for a while? You know, keep them clean and don't abuse them, because they may have to do for quite a stretch. After the AXIS gets the axe, we'll make you rollers that'll top even your present Vulcans for better presswork at low cost. That's a promise."

VULCAN PROOFING CO.
First Ave. and Fifty-Eighth St., Brooklyn, N. Y
3593

MAGNITOGORSK
and
MATANIKAU
are in your plant

No need to look them up—MAGNITOGORSK is in Russia and MATANIKAU in the Solomons—but, they and many other unfamiliar or "jaw-breaking" names are in your plant, appearing as words to be set in type—war-words that need close watching. In their spelling, they're bad enough, but if through type metal difficulties the characters appear imperfect, then pity the poor reader.

Clean, sharp impressions result from type metal under control, and the positive way to type metal control is to let Imperial Type Metal and the Imperial Plus Plan assume responsibility for the condition of your metal, keeping it in perfect balance. Clean, sharp impressions are the rule in the Imperialized plant, and with them reap conservation of your metal supply and lower yearly metal costs. Just in case you have never read it, we suggest that you send for the book, "Everyday Problems of Type Metal Users and Their Solution".

(Ship your scrap plates to Imperial)

IMPERIAL TYPE METAL CO.
Serving The Graphic Arts Industry Only
PHILADELPHIA NEW YORK CHICAGO

Imperial

responsibility to see that the equipment is changed or adjusted, if this is within his responsibility and authority, or to bring the situation to the attention of the proper authority.

Reason—The men say that goggles bother their eyes, or that they can't see well enough to do their work when wearing their goggles.

Answer—The wearing of goggles does not bother men who have normal eyes. If there is anything to this complaint, it means that the workmen's eyes are not normal, and should be examined. It is up to the foremen to see that this is done.

Reason—Can't fire every man who acts unsafely.

Answer—You are not expected to. A good foreman (good because he has executive and leadership qualities) gets results without firing.

Reason—What else can I do other than reinstruct the men?

Answer—Do the same thing (and do it the same way) that you would do if men violated instructions with regard to the dimensions or tolerances of the product.

Among the many things that can be said or done in the way of answers are: give an explanation of the production-versus - accident - prevention analogy; show the employee *how* to do the job safely; appeal to his pride, skill, etc.; suggest that he find out *why* his employees violate the named safe-practice rules; use encouragement, praise, diplomatic pressure, reassignment of work; and, finally, consider engineering revision, by which is meant the changing of the process or operation in such a way that it is made practically fool-proof.

Reason—I haven't got time. I understand that my first responsibility is production.

Answer—It happens to be a fact in this plant, as well as in others, that the best and the most production can be turned out only when the job is done safely. Training of replacement workers takes valuable time.

Reason—I have not made a real effort to enforce safe-practice rules because I am not sure that the boss really wants and expects me to.

Answer—The answer to this objection depends upon the actual facts. If management has not expressed itself, the best answer is to say that the foreman should go right ahead and do his best to enforce safe-practice rules without explicit support from management. Coincidentally, an effort should be made to get management to issue the necessary orders and provide the required support.

Reason—What is all the fuss about—I haven't had any serious accidents in my department.

Answer—You may not have had any serious accidents to date, but by all indications you most certainly are going to have one or more unless the named safe-practice rules are observed.

Reason—You can't expect men to do exactly the right thing about safety *all of the time.*

Answer—Of course, there will be slips occasionally, but there should not be too many of them, and in your particular case the violations of the named safe-practice rules occur frequently enough to indicate common and improper practice.

Reason—I can't force men to do the safe thing. All I can do is tell them and hope for the best.

Answer—A good foreman can obtain safe practice with no more persuasion or coercion than is required to secure quality and volume of production.

The foregoing and other similar objections by foremen are usually expressed as the result of interviews between the foremen and their superintendents, or between the foremen and higher plant executives. It is therefore appropriate to indicate that such interviews provide one of the most effective methods for obtaining results in industrial-accident prevention. The foreman is the man upon whom industry leans largely to enforce safe-practice rules. In addition, such interviews are highly educational in that they deal directly with pertinent facts and with the persons directly concerned, bring out objections and difficulties, and promote the most effective remedies.

When a man is "put on the spot" it is only natural that he will try to defend himself. Also it should be kept in mind that more often than not, he has had little opportunity to reason out his defense and is likely to say things that just pop into his mind. By all means, hold foremen responsible for accidents to their men, but at the same time don't take their hastily gotten up alibis at their literal face value. Read between the lines a bit and be cooperatively helpful and constructive in your replies.

I offer a suggestion which if accepted and put into effect should lead to one of the most interesting and valuable contributions to the industrial-safety movement of the current period. I suggest a Foremen's Safety Round table, wherein

Boyoboyoboy!
INK WITH A BUILT-IN SLIP-SHEET!
LISTEN to the lads who used to say "Oh yeah?" "We haven't slip-sheeted a job since the boss cut the Kelly coupon." (Right down there!) "No reruns for us with that Wotta Non-Scratch Halftone Black!" "We can stack lifts higher than a cat's back and deliver jobs as pretty as a $100 bill."
What do you say? Wouldn't results like that look good around the shop? Cut the coupon and let us show you!
Wotta Blacks ARE GUARANTEED!
CLIP AND MAIL THIS COUPON TODAY!
FREE! Here's a valuable book you'll want — "10 Ways to Avoid Offset." Helpful hints for the pressman. Write for it on your firm letterhead — no obligation.
10 WAYS TO AVOID OFFSET
126
E. J. KELLY CO.
1912 N. Pitcher St., Kalamazoo, Mich. 3-43
O.K. Give us the dope on your FREE TRIAL OFFER on WOTTA BLACKS.
Name .....
Firm .....
Address .....
E. J. Kelly Co. KALAMAZOO MICHIGAN

THE KID ENTRAINS, ENJOINS CARE IN *NUMBERING FOR PROFIT*

★ "Well Pop, this counts me in the Army."

● "Yes Sir! You'll make an A number one soldier."

★ "Ought to, with this swell equipment."

● "Take good care of it."

★ "Right, and you take good care of our Wetter numbering equipment."

● "You mean . . . ?"

★ "Keep it clean and well oiled. Clean it right after heavy runs and oil it with typewriter lubricant."

● "That's a bond between us."

★ "You're not fooling. Let's make it another war bond."

● "At least ten percent every pay day!"

Wetter Lock-Wheel
One of many models

Wetter Rotary
One of many models

WETTER NUMBERING MACHINE CO.
ATLANTIC AVE. & LOGAN ST., BROOKLYN, N. Y.
Sold by all dealers and branches
AMERICAN TYPE FOUNDERS

3432

ZINK CUT CEMENT PRICES in the United States: 75c per large tube; $6.00 per dozen tubes; $5.00 per dozen tubes in gross lots.

Peace of Mind

Mechanical and production executives are always glad to have peace of mind—there are so many little things to worry about. The composing room executive can rid himself of the worry caused by lost or misplaced cuts and the stereotype foreman doesn't need to worry about cuts pulling off their bases when the mat is lifted from the form after molding. When **Booth's Zink Cut Cement** is used according to simple directions both these executives can forget about cuts of any size in the form. Holds any kind of cut to wood or metal base.

Booth's Black Rubber Rolls

are of constant diameter throughout their length when applied properly to line-composing machine keyboard roll shafts. For Linotypes and Intertypes. Compounded from highest grade materials and processed only for the one important purpose of insuring positive rotation of keyboard cams. Try a pair at $1.45; $7.75 per dozen.

On and after April 1, please place on your purchase orders for Booth products the CMP Reg. 5 certification with the symbol AA-2X which has been granted to the printing and publishing industry for the purchase of maintenance, repair and operating supplies.

THE E. A. BOOTH RUBBER COMPANY
364 ROCKEFELLER BUILDING • CLEVELAND, OHIO

Your Saw Trimmers *NOW!*

In many plants inaccurate saw trimmers are nearing the end for efficient usefulness. The life of some can be extended by repairing and replacement of worn parts.

Others should be replaced as soon as obtainable. You can insure the earliest possible delivery on C&G 3-A Saw Trimmers, complete with C&G Positive Work Holder, Any Angle Gauge, Universal Saw Grinding Attachment with Universal Blades, and other exclusive features, by ordering NOW.

A circular giving complete information on the C&G 3-A Saw Trimmer will be sent upon request.

MILWAUKEE SAW TRIMMER CORP.
610 EAST CLYBOURN STREET, MILWAUKEE, WISCONSIN

only foremen will be the members, officers, and speakers. I suggest that the agenda for this meeting deal altogether with the general question, "How best can foremen go about the job of enforcing safe-practice rules?" As leading items for discussion under the general heading, I suggest:

1. What to do with the uninformed employee?
2. What to do with the day-dreamer?
3. How shall we deal with the accident-repeater?
4. How shall we handle men whose attitude is improper?
5. What is the value of finding out *why* our men violate safe-practice rules?
6. The similarity of methods used in controlling *quality* of production with those used in controlling *unsafe performance.*
7. The value of interviews with individual workers.
8. Should we draw the superintendent, manager, or other executives into our safety problems, or wait until a poor record causes the executives to call us in?
9. Enforcement of safe-practice rules is good for the workers, for us, for industry, and for the nation.
10. The authorities and responsibilities that go with foremanship.

At a gathering of foremen only, there surely would be much pertinent and illuminating discussion. From what I have learned by inquiry, an honest-to-goodness, down-to-earth meeting would take place between the very men on whom we are depending to get results in accident prevention.

Regional NGAE Conference

On Saturday, May 1 a Regional Conference of the National Graphic Arts Education Association will be held at the Rochester (N.Y.) Athenaeum and Mechanics Institute, from 9 a.m. to 4 p.m. Regional Vice President Joseph F. Sorace, who also is an instructor at RAMI, is in charge of the meeting. Dr. Mark Ellingson, president of RAMI will extend greetings at the opening session, and Hupp E. Otto, president of the association follows immediately after. A number of other speakers will discuss subjects important to the profession.

The front office wants good printing and satisfied advertisers. You want trouble-free manipulation. You're both 100 per cent satisfied when you use Burgess Chrome Mats.
247
A Laboratory Product
BURGESS
Chrome
MATS
BURGESS CELLULOSE COMPANY
Manufacturers and Distributors of Burgess Chrome and Tone-Tex Mats
FREEPORT ILLINOIS
Pacific Coast Representative
RALPH LEBER CO.
426 Polson Bldg.
SEATTLE, WASH.

A DOUBLE HEATING UNIT IN A SINGLE CASING

For Linotype Electric Pots

It replaces **both** inside elements, and has the following advantages:

1. Heats up faster.
2. Lasts longer—because of its thicker case and improved construction.
3. Easier to remove and to install.
4. If one unit burns out, the other will furnish sufficient heat to facilitate removal.

Its final recommendation is the fact that in no instance that we know of, where one of these elements has been installed, has the user gone back to the conventional style.

So, specify a CHROMALOX HEATING UNIT the next time a pot element requires replacements.

Precision TRADE ★ MARK Parts

Belts are purchased less frequently — and better traction obtained — when ACE BELTS are in use.

LINOTYPE PARTS COMPANY

WEATHERLY, PA. (Factory and Main Office)

KANSAS CITY 314 West 10th St.

CHICAGO 318 W. Randolph St.
MINNEAPOLIS 503 Fourth Ave., South
DENVER 1441 Blake St.

Keep Your Equipment In Shape for the Job Ahead

● Gas rationing, to the Salesmanager, means more sales contacts and selling through the mails. This will place a far greater burden on all printing equipment during 1943. In many instances it will call for overtime press runs and a "step-up" of production speed all down the line.

To you it will mean careful, periodic inspection of your equipment. Prompt repair and replacement of broken and worn parts. In general, a stricter vigilance over all machinery that costly breakdown and repair delays may be avoided.

CHALLENGE will co-operate to the best of its ability in serving customers and dealers . . . in supplying necessary replacement parts . . . and to deliver, whenever possible, essential equipment to printers, publishers, typesetters and binders.

★

As a friendly bit of advice we think it only good business "TO TAKE CARE OF WHAT YOU HAVE!"

The Challenge Machinery Co.

1893 50TH ANNIVERSARY 1943

GRAND HAVEN, MICHIGAN

442

Eastern Sales Office: 50 Church St., New York

EXECUTIVE ¶s

The Lithographers National Association, Inc., announces the appointment of William L. R. Broun to its staff, as executive assistant to Secretary W. Floyd Maxwell. He will assist in the digest of legislation flowing out of Washington, write confidential bulletins distributed to the Association's membership, service inquiries and assist in the educational program, which is expected to become increasingly important within the near future.

General Sales Manager J. G. McGreevy has announced that Walter Moser has joined the Gardiner Metal Company as district manager for the Ohio, Indiana, and Kentucky area, with headquarters in Cincinnati. For fourteen years he was associated with the Metals Refining Company of Hammond, Indiana.

Printing plant executives will regret to read about the passing of Abe Cushman, president of Cushman Electric Company, Concord, N. H. on January 17 in the Concord Hospital as the result of a cerebral hemorrhage with which he was first afflicted on January 13. Burial occurred in Concord where he had lived for more than 60 years. He is survived by his wife, Vera I. Cushman. Mr. Cushman was well known as an electrical engineer. Mr. Cushman did considerable pioneering in electricity to harness it for practical use. He installed in his own workshop the first electric light in Concord. For this purpose, he sent to England for literature about dynamos and motors, building his own dynamo, the bulbs for which he secured in England. The second motor built by Mr. Cushman in his shop was applied to a typesetting machine in the Concord *Monitor* offce in 1893. Also, the first tri-phase motor to be built in the United States was supplied to a machine in Concord. From 1893 on, he continued to manufacture the Cushman Offset motor for driving composing machines. A great many of these motors are in operation in printing plants throughout the country. It is expected that Mrs. Cushman will carry on the business with which she has been intimately associated in a management capacity for a number of years.

Abe Cushman, pioneer electrical engineer, died in Concord, N. H. on January 17.

The Sigmund Ullman Company, Division of General Printing Ink Corporation, announces the appointment of Edward J. Kiefer as Eastern Sales Manager. He has been associated with the Sigmund Ullman Company for fourteen years and has served in various capacities, including salesman and branch manager.

William Loren Batt, vice chairman of the War Production Board, and president of SKF Industries, Inc., Philadelphia manufacturers of ball and roller bearings, has been awarded the Bok Award—a medal and a $10,000 check—for his service to the nation in leading industrial mobilization of the war, and as a citizen who performed the most distinguished service for Philadelphia in 1942. This award is the twenty-first since its inception by the late Edward W. Bok in 1921.

ONLY EDES CAN GUARANTEE GAUGE ACCURACY

ZINC — Regular and Hard Matrix — in Standard Sizes in .064, .049 and .032. No extra charge for Roto Grip Finish.

TRIPLEMETAL — The best copper substitute immediately available. Standard Sizes in .064 and .049.

COPPER (Gravure Finish) — Supplied only in .049 in 14x34, 15x36, 18x36 and 22x28.

V-KOTE — A non-metallic acid resist on heat-treated zinc alloys. Saves time, money and minimizes register problems on zinc.

EDES ENGRAVING METALS

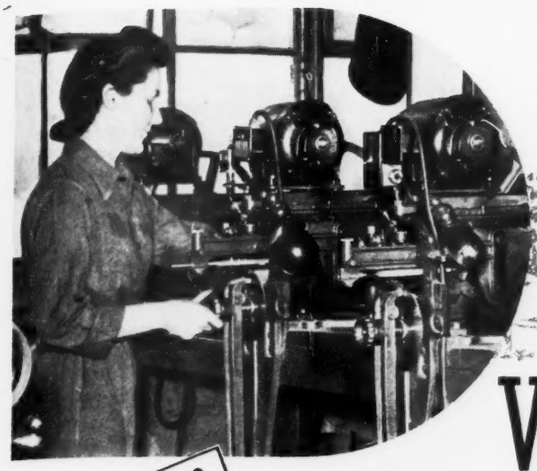
PROMPT DELIVERY ON PROPERLY RATED ORDERS

THE EDES MANUFACTURING COMPANY

PLYMOUTH, MASSACHUSETTS

Authorized Representatives

CHICAGO: Chemco Photoproducts Co.
NEW ORLEANS: Chemco Photoproducts Co.
ST. LOUIS: Mid-West Photo-Eng. Supply Co.
WASHINGTON, D. C.: E. H. Walker Supply Co.
RICHMOND, VA.: E. H. Walker Supply Co.
BOSTON: Allan B. Croke Co.
BUFFALO: C. S. Illingworth
DETROIT: R. L. Porter
CINCINNATI: G. C. Dom Supply Co.
AKRON: Metzger Photo Supply Co.
SAN FRANCISCO: J. W. Feinstein
ATLANTA: Chemco Photoproducts Co.
DENVER, MINNEAPOLIS, TULSA, WICHITA, MEMPHIS, DALLAS, OMAHA, KANSAS CITY, OKLAHOMA CITY, DES MOINES, HOUSTON, SAN ANTONIO } Thompson-Hayward Chemical Co.



Hammond
OF KALAMAZOO

VITAL! TO YOU...

TRIMOSAWS
• EASYKASTERS
• ROUTERS

Women at Hammond's play vital roles in highly specialized saw sharpening service which is still available to you. Factory sharpened saws are best.

Have your blades factory sharpened with perfect truing, precision swaging and automatic machine sharpening — they'll last longer! Write for details about "special offer" coupon book.

Hammond Machinery Builders INC.
KALAMAZOO, MICHIGAN

1604 DOUGLAS AVENUE . . . EASTERN BRANCH, 71 WEST 23rd STREET, NEW YORK, N. Y.

The E. J. Kelly Company announces the appointment of L. J. McDermott as vice president and Jack Beierwaltes as sales manager.

Mr. McDermott has been associated with the Kelly Company for the past nine years. He will continue work as a special representative in the Southern states and up-state New York.

Jack Beierwaltes came to the E. J. Kelly Company in 1935 as a laboratory assistant. Two years later he established a direct mail department for his firm and in 1937 was appointed advertising manager. Mr. Beierwaltes was promoted to co-sales manager in 1940.

L. J. McDermott

Jack Beierwaltes

Everett C. Miller, formerly a representative with Linotype Parts Co., who was recently selected from the ranks to attend the Engineer School at Fort Belvoir, Va., has been commissioned a second lieutenant in the Engineer Corps and is now stationed at Fort Leonard Wood, Mo.

Harry G. Willnus, vice president of Intertype Corporation, was recently elected a director of the Home Title Guaranty Company of Brooklyn.

Wm. T. Goss is now a vice president of Goss Printing Press Company.

William T. Goss was recently made a Vice President of the Goss Printing Press Company. Son of William T. Goss, one of the founders, he began work with the Company in 1925 after attending the University of Wisconsin. During the last 13 years he has been sales representative in the north central section of the country following preparation in various departments including machinists apprentice and press erector.

Three executive promotions were announced by S. F. Wollmar, executive vice president of SKF Industries, Inc., Philadelphia, manufacturers of ball and roller bearings, following a recent meeting of the Board of Directors. Thomas W. Dinlocker was elected vice president and treasurer, Richard H. DeMott vice-president in charge of sales, and C. P. Collins, secretary.

Could Drop Magazines to 20% and Newspapers to 40% of 1939 Level Under Bedrock Economy

A STATISTICAL statement prepared under supervision of Director Joseph L. Weiner of OCS for Director James F. Byrnes of the Office of Economic Stabilization, was made public recently. The report is designed to show what civilians would require in a bedrock economy. This is a point, however, which is not expected to be touched. Going below bedrock economy would be disastrous. It is conceded in the report that the tables involved a certain amount of arbitrariness, but such an approach is described as inevitable. In addition, they did not contemplate "a situation so desperate as to involve the siege and blockade of this country."

Under "Minimum Civilian Consumer Requirements for Magazines, Newspapers, and Other Printed Matter, it is stated in the report:

"Newspapers. It should be pointed out that final cost to consumers is of doubtful value in measuring the amount of newspapers or periodicals delivered to a civilian economy. Circulation revenue is 90% of the volume of this business is of minor importance to the primary objective of supplying media for advertising. However, to afford a comparable index of dollar values over the prewar period of 1939, the above percentages and values may be accepted as indicating the great falling off in variety of publications offered for sale under a shrinking economy in which advertising expenditures will not justify the existence of a great many borderline profit makers in the newspaper and periodical fields. The shrinkage to 40% of prewar newspaper sales would reflect curtailment in the mount of paper (and reading matter) contained per copy as well as declines in circulation. Measured by newsprint consumption, requirements for newspapers would be 20% of 1939.

"Magazines. It is obvious that the proportion of magazines devoted purely to entertainment allows them to shrink to a greater degree than newspapers without affecting the public interest. For this reason, magazines can drop to a 20% level as against the 40% level considered a minimum for newspapers in terms of final cost to consumers."

"Consumption" in 1939 (at manufacturers (prices) was listed at $306,000,000, and the publishers' value was totaled at $122,400,000. Comparable data on magazines and other printed matter (except newspapers) were $166,000,000 and $32,200,000. Totals, therefore, were $472,000,000 and $155,600,000.

AMERICA'S FIGHTING MEN ALWAYS COME THROUGH

AND THE SAME CAN BE SAID FOR AMERICAN ROLLLERS

On land . . . on sea . . . in the air . . . America's fighting forces are displaying the stout-hearted heroism and indomitable spirit that have made America the greatest nation on earth. ● And on countless presses large and small, AMERICAN ROLLERS day by day demonstrate they've got the stamina to stand the grind and come through with flawless performance. ● Hundreds of printers use these rollers exclusively because they're pre-conditioned to render extra service . . . forearmed at the factory with the durability and functional quality to serve better. Any test you care to make will prove these facts. Order a set and see.

AMERICAN ROLLER COMPANY
1342 NORTH HALSTED STREET . . . CHICAGO, ILLINOIS
225 NORTH NEW JERSEY STREET, INDIANAPOLIS, INDIANA
1531 BRANCH STREET . . . . . SAINT LOUIS, MISSOURI

Intertype's 27th Report

The 27th annual report to stockholders was published on March 19 by President Neal Dow Becker of Intertype Corporation. Operations of the Corporation for 1942, after setting up reserves for depreciation and taxes, resulted in a net profit of $369,995.90. Out of that profit the Directors added $100,000 to the reserve set aside in the previous year to provide for abnormal future losses which may result from wartime or post-war conditions. The remaining profit of $269,995.90 is equivalent to $1.21 a share upon the 221,740 shares of common capital stock outstanding.

"The major activity of the Corporation during 1942," it is stated by President Becker, "was, of course, work in connection with the national war effort. . . . We have continued intensively our program of research and development for the benefit of the printing and publishing industry of the future."

L-226

(Continued from Page 18)

to procure less than 25% of the steel they certified they needed *solely for the making of repair parts*. In the current quarter, the material allotments are higher but still nowhere near the actual need. So, while we will try to adjust the percentages in Order L-226 to meet actual needs as they develop, we have concluded that the *manufacture* of supplies and repair parts must be limited.

And what justification can be made for the restrictions on the *delivery* of supplies and repairs to the consumer? Here it is: To encourage the actual turn-in of scrap metal and to limit the buying of parts to actual needs, in order that the over-all supply can be spread as widely as possible. Some manufacturers in our industry have already been using similar plans

If you are not using it

SEND FOR SAMPLE

"FLECTO" Gummed Backing Felt

Porosity permits quick escape of steam — glue coat prevents slipping or leaving matrix under heat. Adhesive does not crack, peel, or crystallize. Gauges .021, .025, .030, and .035 in sheets 18"x 24" also gauges .040, .045, .050, and .060 in sheets 18"x 22" — no charge for strip cutting.

"TRUE-MOLD" CORK MOLDING BLANKETS

Sets match in weight and density, give better molding. Uniform density throughout gives "TRUE-MOLDING" over entire form surface. We furnish hard and extra-hard (special) blankets.

EASTERN NEWSPAPER SUPPLY

9603 Northern Boulevard Corona, New York

"That balloon sure lacks the stay back we get from WOOD DRY MATS."

WOOD DRY MATS

WOOD FLONG CORPORATION

HOOSICK FALLS, NEW YORK

New York City Office: 551 Fifth Avenue

of their own devising for several months. The practice of turn-in of old parts or of certification by the consumer is already in use in other WPB orders. For instance, the automobile repair parts order, including parts for trucks and buses: No. 2-b, on machine cutting tools; L-123, on repair parts for general industrial equipment, including conveying machinery, industrial pumps, compressors, elevators, etc., and a repair order now in preparation on textile machinery in which certifications by the consumers will be required. So we believe that the objectives and the precedents of other Divisions of WPB justify the restrictions on *delivery* of supplies and repair parts in L-226.

In paragraph (f) you will notice that provision has been made for shipments of operating supplies and repair parts to distributors without the necessity of certification. This has been done because distributors will be required to get that certification from users when they sell the parts to them.

GOVERNMENT PRINTING

(Continued from Page 22)

Under procurement law and regulations, the certifying officer of every Federal department, including the Government Printing Office, must certify that the Government has actually received the articles or services for which payment is being made. In view of this legal requirement, you can see why it is necessary for the certifying officer to secure, in support of his certificate, an executed receipt of the consignees, which form in our case is called Notice of Shipment—Confirmation of Delivery, Form 2196.

Nowadays, much of the work of Government agencies is performed under considerable pressure and abnormal conditions. Unfortunately, the field units of some departments do not always promptly execute and return to the contractor confirmation of delivery forms. As time goes on we expect the field units of the departments to obtain a better understanding and immediately mail the receipts to consignors. The Government, moreover, is not always at fault in respect to delay on delivery receipts. It sometimes happens that the contractor neglects to send out the receipt forms which we have furnished and have instructed him are required as a basis of the certificate of the receiving officer. In this way the printer's oversight causes payment to be held up until proper receipts are obtained. In the first instance it is the fault of the Government; in the second that of the contractor. In either case, however, the contractor, who has paid out his money for labor and materials, needs the pay for the job.

To expedite payment on this class of orders, two changes are being made in our financial procedure:

1. If a contractor has completed an order of a value in excess of $2,000 and has sent out the Notices of Shipment—Confirmation of Delivery, Form 2196, as required by the Government Printing Office purchasing regulations, and has received back one-half of the forms, or more, from the consignee Government units, he may send in such forms with a voucher and immediately receive a prorata payment from the Government. Furthermore, if he is unable later to obtain all the remaining receipts for shipments he has made, and he has filed the triplicate copies as required with the Government Printing Office, on request of the printer our Office will thereupon communicate with the department, seeking to expedite submission of remaining receipt forms, so that the full amount of the remaining balance can be paid to the contractor.

2. If an order exceeds $5,000 and the contractor has made complete delivery as required by the purchase order and wishes to receive an immediate payment on the account without waiting to secure receipts from consignees, he may thereupon make application and receive a progress payment under Title II of the First War Powers Act, by furnishing satisfactory bond. The printer's application should be accompanied by a voucher and a certificate setting forth details of shipment, such as the name and address of consignee Government units, railroad or other carrier, car number, and recorded weight of the shipment, which must be supported by either the original or a photostat of the paid freight or express bills. Upon receipt of the voucher and supporting certificate, if all

other conditions are met, the Government Printing Office will immediately make payment to the contractor, not to exceed 90 percent of the total value of the contract. The remaining 10 percent due the printer will be withheld until he has established delivery for all shipments by submission of completed Notices of Shipment—Confirmation of Delivery, Form 2196.

The introduction of these two new arrangements should help a contractor who may find himself hardpressed for funds on an extensive Government order. To illustrate how these provisions work—assume a contractor has an order for $10,000 requiring delivery to a number of destinations, as for example war manuals or forms to various areas. Further, assume that the contractor has sent out, as required, the forms for securing receipts for delivery from consignees but has received back only an even 50 percent of the receipts at the time he makes his application. In such cases he may submit a voucher supported by the delivery receipts he has received, and obtain a payment of $5,000. In respect to the remaining balance due, upon furnishing a bond he can obtain 90 percent of the same, or $4,500, making a total payment of $9,500. The remaining $500, however, will be paid only upon submission of all delivery receipts as required under our purchase regulations.

I believe you will find that these provisions will materially ease the situation with respect to payments.

The forms for the application, surety bond, voucher, and certificate of shipments will be furnished upon request by the Accounts Division of the Government Printing Office.

THESE Rouse TIME-SAVERS
CAN BE DELIVERED NOW
---from stock
Rouse Lead and Rule Cutters, Make-up Rules, Line Gauges, Register Quoins, and Composing Sticks can be purchased without red tape as long as the present supply lasts.
This inexpensive equipment has much to do with the efficiency of your plant. It should be checked often and replaced as soon as it becomes worn or inaccurate.
See your Rouse dealer and order essential equipment while it is still obtainable. Catalog listing all Rouse Time-Savers will be mailed at your request.
Rouse
Economy Miterer
This Rouse Power Miterer will cut 800 accurate miters an hour direct from strip material. It is definitely a labor-saver.
The Rouse Economy Miterer is priced low enough for the smaller printer. If you do not have full information on the Rouse Economy Miterer, write today.
H. B. ROUSE & CO.
2214 N. WAYNE AVE., CHICAGO, ILL.

Presidential Executive Orders Governing Hours and Wages

Several printers have asked me to explain the provisions of Executive Order 9240 relating to overtime wage compensation as affecting contractors with the U. S. Government. In interpreting this order, the Secretary of Labor has held, and correctly so I think, that the order applies to all contracts of the Government Printing Office.

The terms of the order cover premium wages and extra compensation payable to employees of a company for additional overtime work under the following conditions:

(1) Where because of emergency conditions an employee is required to work for seven consecutive days in any regularly scheduled workweek, a premium wage of double time compensation is payable for work on that day.

(2) Where required by provisions of law or the employment contracts, not more than time and one-half wage compensation shall be paid for work in excess of eight hours in any day or forty hours in any workweek or for work performed on the sixth day worked in any regularly scheduled workweek.

(3) No premium wage or extra compensation may be paid for work on customary holidays except that time and one-half wage compensation shall be paid for work performed on New Year's Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas Day, and either Memorial Day or one other such holiday of greater local importance.

As I have said, these requirements are applicable to the contracts of all Federal agencies, and govern existing contracts of the Government Printing Office. If on any contract your compensation is based on cost, as for example, authorization to incur additional charges for accelerated delivery, no work should be performed by your company in conflict with the provisions of this Executive Order. No payment can be made by our organization or any other agency to a contractor of a premium wage greater than the rates provided in the order. This order applies even though your existing contract with a union may call for a higher compensation rate under certain conditions. If on any job there is uncertainty, before undertaking the work you should immediately get in touch with our Washington office and receive appropriate instructions.

Now, I am going to talk to you about a matter very touchy with a few of the printers. That is reimbursement of money advanced for prepayment of freight or express charges. On certain kinds of contracts—frequently those relating to manuals, forms, and certain other kinds of printing involving numerous distribution points which could not be listed in the invitations to bid, or other contracts—the Government Printing Office has required the printer to pay freight or express charges, and then reimbursed him upon proof of delivery. This form of arrangement has been used only on that type of printing where the contractor could not bid on job delivered f.o.b. point of destination, as is usually required in competitive bids.

"COLOR IS LIFE

COLOR into life is woven,
From a formula well chosen
By the Gods whose gifted talents
Rule our Planet's path in space.

Give us then the strength and foresight
To hold this gift an earthly birthright
And in spirit just and upright,
Spread more color every place.

And There Is Life In S. & V. Colors — Available In All Shades"

Sinclair and Valentine Co.
MAIN OFFICE AND FACTORY: 611 WEST 129th STREET, NEW YORK, N. Y.
Albany Baltimore Birmingham Boston Charlotte Chicago Cleveland Dallas Dayton Detroit Havana Jacksonville Kansas City Los Angeles Manila Miami Nashville New Haven New Orleans Philadelphia San Francisco Seattle

CROMWELL SPECIAL PREPARED TYMPAN

comes through in the race for better presswork at *lower cost*

Obstacles? Cromwell Tympan is definitely proof against the toughest pressrooms can offer. It provides the protection needed for delicate make-ready jobs and gives clear, clean impressions throughout long runs. With today's government limitations on paper, this protection is *more vital than ever.*

A secret process makes Cromwell Tympan moisture-proof—a protection against atmospheric changes. Uniformity is guaranteed within .001 inch. You can draw Cromwell Tympan absolutely tight against the cylinder, yet it won't stretch or tear from the clamp, or be injured by sharp rules or edges. Cromwell Tympan is oil and ink solvent proof, too!

Minimize spoilage, avoid waste of trial sheets, by getting Cromwell Tympan today. Skilled craftsmen say: "There's only one tympan for the results I want—Cromwell!" Your distributor has it in rolls or sheets, cut to fit any press.

The Cromwell Paper Co.
4801-59 S. WHIPPLE ST.
CHICAGO, ILL.

On the special contracts on forms or manuals, where the Government Printing Office stands the cost of transportation from the plant to the consignee, our future policy will be to furnish the contractor prior to time of shipment a Government bill of lading, so that the printer will not have to make any outlay for the transportation. The Government bills of lading will be prenumbered, so that you will have to account for each bill of lading on an order. As each shipment is made, a bill of lading will be prepared by the printer. The bill of lading and the necessary copies will be prepared in accordance with instructions issued by the Government Printing Office. I have no doubt this change in our procedure will be welcome to those printers who in the past have had to make sizeable outlays for this purpose.

PATENT REPORT

(Continued from Page 31)

replacement web to adhere to the end of the expiring web. Invented by Allan J. Cline, Evanston, Ill. Unassigned. Application July 10, 1941. 6 claims.

2,313,100. SHEET FEEDING MECHANISM of the type in which sheets are separated from a pile and then forwarded and registered while at least two sheets are in partly lapped relation to one another, especially designed for high speed cylinder presses. This feeder is said to offer marked advantages over conventional feeders now in use because it is constructed so that the distance over which a sheet has to travel from the pile to the registering guides is reduced to a minimum, thereby permitting the least number of sheets to be in motion. This affords a better supervision and control of the sheets in transit. Furthermore, each sheet, as it travels to the guides, is maintained in the same plane as the top sheets on the pile. These features render the feeder extremely convenient to operate and easy to reset when misfeed occurs, so the feeder can be again brought into operation in minimum time and without the loss of any sheets. Invented by Burt D. Stevens, Barrington, Ill. Assigned to Miehle Printing Press & Mfg. Co., Chicago, Ill. Application August 26, 1940. 49 claims.

2,314,411. WEB REGISTERING DEVICE for use with an intermittent feed and severing mechanism for a continuous web. Invention is especially useful where articles such as bottle hoods are printed in continuous web form and later severed. An improved mechanism is provided for varying the amount fed each time proportionately to the degree to which the web has expanded or shrunk because of atmospheric changes, thereby assuring that the lines of severance shall match with the printing. Invented by Norman W. Lyon, Springfield, Mass. Assigned to Package Machinery Co., Springfield, Mass. Application February 5, 1942. 3 claims.

Miscellaneous:

2,312,172. SLITTING AND REWINDING MACHINE in which novel means are provided for regulating the extent of the movement of the plurality of slitter disks to and from their coacting platen drum. Each disk is carried at one end of a lever to which is also attached a leaf spring for resiliently engaging the disk with the drum. The levers are pivotally supported upon a bar and an I-beam extending across the machine. The beam is supported at opposite ends by eccentrics journaled to a rock shaft which has a worm wheel secured to it, the worm wheel being engaged by a worm which is rotatably mounted in a lever. The positions of the worm and the lever relative to each other may be varied by turning the worm shaft which has one end adapted for manipulation with a suitable wrench. Invented by Robert McC. Johnstone, Bondsville, Pa. Unassigned. Application January 30, 1942. 9 claims.

2,312,173. SLITTER UNIT ASSEMBLY carrying one of the slitter disks as used in the machine described above. The slitter lever carries a slitter disk at one end and an extending resilient leaf spring at the other. The disk functions to slit the web against a coacting drum; the spring, to press the lever into position. In the middle section of the lever is a fulcrum-receiving socket designed to receive a knife-edge fulcrum which extends across the machine in the form of a bar. The knife-edged fulcrum substantially eliminates friction and thereby affords more efficient slitting with reduced tension. Invented by Robert McC. Johnstone, Bondsville, Pa. Unassigned. Application January 31, 1942. 6 claims.

2,311,850. IMPROVED ADHESIVE FOR FLOCK AND RELIEF PRINTING which not only possesses the necessary loft but which is also flexible, insoluble and resistant to washing, ironing and dry cleaning. Adhesive comprises an oil-modified alkyd resin of the heat-convertible, non-air-drying type, dispersed by means of a volatile dispersion medium such as xylol. The resin may be obtained by reacting 1.1 molecular weight of glycerine with 1.2 molecular weight of phthalic anhydride and 1 molecular weight of fatty acids derived from a non-drying or semi-drying oil, e.g. castor oil. Reaction is carried out at a temperature up to 230° C. until a viscosity of about 2-6 and an acid number of less than 10 is obtained. Example of a flock printing composition: Resin—33 parts (by weight), Solvent—9, Pigment—22, Water—36. Invented by Charles L. Mantell, Manhasset, N. Y. Assigned to United Merchants & Manufacturers, Inc., New York, N. Y. Application May 1, 1941. 3 claims.

2,312,927. COATING OF PAPER with moisture-proof, grease-resistant glossy film to prevent "bleeding" of inks on the paper. A coating roll of metal with intaglio recesses such as dots or lines engraved in its surface, turns in a bath of coating material which fills the recesses after which the excess coating is removed from the roll with a scraper. A web of paper is held against the coating roll by a rubber-faced presser roll. The coating is applied hot and is cooled rapidly so that the coating adheres to the surface of paper without penetrating it. Various coatings can be used, e.g., mixtures of certain heavy metals with resin and wax such as: 18½ parts magnesium stearate, 36⅔ parts zinc stearate, 25 parts resin, 10 parts of the zinc soap of japan wax, and 10 parts of paraffine wax. Invented by John D. Murray, Chicago, Ill. Assigned to Murray Liquafilm Corp., Chicago, Ill. Application September 22, 1938. 1 claim.

Plate Making:

2,311,809. MULTICOLOR PLANOGRAPHIC PRINTING PLATES made in less time than normally required, by means of a novel process permitting colloid printing portions to be quickly formed and arranged in register. The steps include forming a greasy image of one color on a colloidal printing surface and then offsetting the greasy image on a printing material having a hydrophilic coating and a film of gum arabic. To this is applied an aqueous suspension of a colloid and a light-sensitive chromium compound in those parts of the second lithographic printing surface uncovered by the offset greasy image. The second printing member is exposed to photographic light to harden the aqueous suspension of colloid light-sensitive salt. Water is applied to the portions of the hydrophilic coating and gum arabic film covered by the greasy image and the greasy image is washed away to leave grease-receptive areas adapted to constitute printing portions of a second color. Invented by Ellis Bassist, Brookline, Mass. Assigned to William C. Toland, trustee. Application December 28, 1940. 9 claims.

2,311,888. SIMPLIFIED PLANOGRAPHIC PLATE-MAKING METHOD which entirely eliminates the step of rubbing greasy developing ink over the light-sensitive coating after exposure to light through a photographic negative. Instead, the unexposed light-sensitive coating, such as made of albumin and ammonium bichromate, is originally covered with a relatively thin film of a greasy material which offers little resistance to the passage of actinic light. Such a greasy material may not contain opaque pigments or it may contain a blue pigment highly translucent to actinic light. Exposure is made through the greasy film itself, after which the unhardened parts of the underlying light-sensitive coating, as defined by the photographic negative, are washed away in the usual manner and they carry with them the adhering developing material. The pre-application of the greasy developing material results in a shield for the light-sensitive material, protecting it from being scored or rubbed off as well as from ordinary light and thereby extending the time the plate may be kept before exposure. Invented by William C. Toland and Ellis Bassist, Brookline, Mass. Assigned to William C. Toland, trustee. Application January 2, 1941. 5 claims.

2,311,889. PAPER LITHOGRAPHIC PLATE with a water-receptive grease-repellent layer disposed between the water-repellent substance on the paper base and the grease-repellent surface mixture of clay and a binder which is grained to resemble the non-printing portions of a lithographic stone. The new intermediate layer is preferably formed of a water-receptive colloid which maintain small amounts of moisture. It is provided because it has been found that after a greasy printing image is formed by known processes, there is a tendency for the greasy ink to penetrate the grease-repellent surface mixture and become attached to the paper base, which may cause scumming or failure of the plate to reject ink in the non-printing areas. Invented by William C. Toland and Ellis Bassist, Brookline, Mass. Assigned to William C. Toland, trustee. Application November 19, 1941. 7 claims.

2,312,042. ELECTRICAL SYSTEM for a photo-electric halftone engraving machine of the type shown in Losier patents 2,092,764 and 2,092,765. Two separate power sources are used. One power source operates the cutting tool with a constant length of its reciprocating strokes whatever the depth of its entrance into the material being cut (whether for light, intermediate or dark shades of reproduction.) The other power source changes the mean point of the reciprocating strokes in accordance with the depth of the tool's entry into the material being cut as the various tones of light and shade are being reproduced. Invented by George E. Losier, Bloomfield, and Leo V. Skinner, Newark, N. J. Unassigned. Application August 3, 1940. 2 claims.

2,312,499. PLANOGRAPHIC PRINTING FORM capable of being tanned in selected areas to retain fatty printing ink and yet having a high capacity for water absorption so as to repel fatty printing ink in the untanned areas. The form's surface is an acetyl-cellulose film or layer with exactly the degree of decomposition which has the best ability for water absorption and capacity for tanning. It is found that as triacetyl-cellulose is decomposed, its water absorption ability increases while its tanning capacity decreases; therefore exact degree of decomposition is important. Alkaline decomposition, instead of an acid method, is used because action of caustic soda or lye is quantitative according to the calculated caustic addition. Further, adequate alkali does not reduce the resistance of the acetyl-cellulose film to tearing. Invented by Friedrich Lierg, Vienna, Germany. Vested in the Alien Property Custodian. Application April 19, 1939. 28 claims.

2,312,852. LIGHT-SENSITIVE ELEMENT which may be stored and shipped in an unexposed state and which may be exposed and developed at any desired time to form a planographic printing plate. The invention avoids the objections usually connected with developing a plate sensitized with a chromic salt and makes possible the use of gelatine as the printing portion. The photosensitive coating employed is an emulsion such as containing a silver halide salt, e.g. silver bromide, mixed with a colloid as a gelatine. This thoroughly bonds with an undercoating of water-receptive polyvinyl alcohol which is carried by a sheet support such as laminated paper and/or resin structure claimed in patent No. 2,280,985 reported in the June, 1942, *Printing Equipment Engineer*. The gelatine with its light-sensitive salts is hardened according to the photographic image and the unexposed portion is washed away. Invented by William C. Toland and Ellis Bassist, Brookline, Mass. Assigned to William C. Toland, trustee, Brookline, Mass. Application January 24, 1940. 4 claims.

2,312,854. LIGHT-SENSITIVE ELEMENT which, as described in patent 2,312,852, above, may be stored in an unexposed state. The tendency of a printing plate colloid, such as bichromated albumin, to lose its sensitivity is greatly reduced by applying it to a protective layer which is of an absorbent colloidal-like character and water-soluble. The light-sensitive colloid penetrates and becomes dispersed in the absorbent layer and is thereby prevented from reacting within itself, so as to become a light-sensitive medium of constant nature. The base support may be a flexible, non-stretchable paper which, as a ready-to-use light sensitive element, may be stored in rolls. Invented by William C. Toland and Ellis Bassist, Brookline, Mass. Assigned to William C. Toland, trustee, Brookline, Mass. Application July 20, 1940. 8 claims.

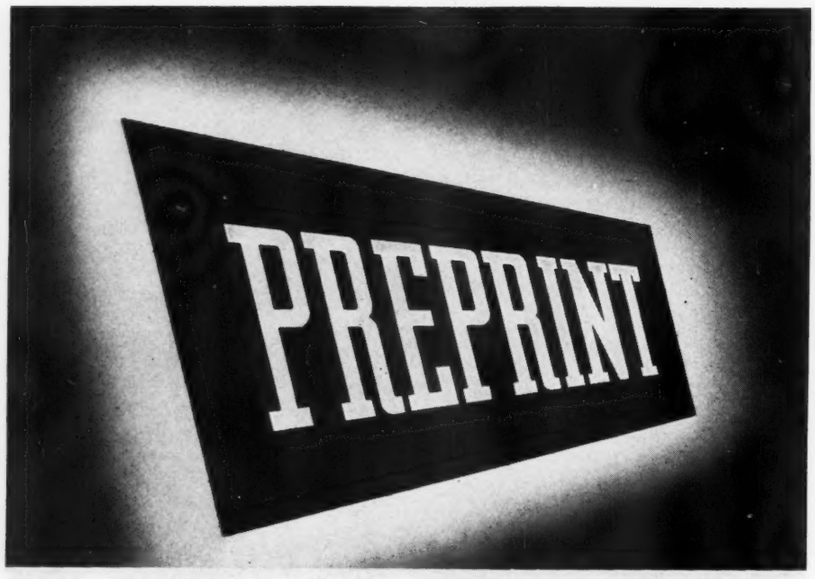
2,313,622. MACHINE FOR BLACK-LEADING AN ELECTROTYPE MOLD. The black lead or graphite coating is in the form of a thick paste stored for use in a well. An electrotype mold is placed on the supply table and a quantity of the paste applied to the surface of the mold. The mold is then fed by a conveyer belt under brushes which are rocked to tamp the black lead into the surface of the mold. After the machine has been in operation for some time the brushes become coated and serve to spread coating uniformly over all parts of the mold. The machine is particularly adapted to apply coating to a thermoplastic sheet material which has slightly roughened surfaces. In the case of an electrotype mold, the black-leading may be performed both before and after molding the thermoplastic sheet material so as to produce the continuous, uniform coating required for electroplating. Invented by George W. Bungay, New York, N. Y. Unassigned. Application September 27, 1940. 10 claims.

2,313,623. HYDRAULIC MOLDING PRESS for making a thermoplastic electrotype mold. A sheet of synthetic thermoplastic material is black-leaded, placed on the type form which is to be impressed, is heated until pliable and then molded under high pressure. This invention provides an improved press having cooling means so that the thermoplastic sheet is cooled and set while under molding pressure. The press may be set for any predetermined pressure and maintained at such pressure during molding operation. Type impressions are sharp and clearly defined due to cooling and high pressure molding, and the mold is said to produce high quality electrotype plates. Invented by George W. Bungay, New York, N. Y. Unassigned. Application September 27, 1940. 9 claims.

2,313,848. PAPER-BASED PHOTOLITHOGRAPHIC PRINTING PLATE made from a light-sensitive element similar to that described in patent 2,312,852 (see above) of which the present patent is a continuation. The photosensitive emulsion of an aqueous mixture of gelatine and a silver halide is selectively exposed to light and developed by an agent, such as hydroquinone, changing the exposed silver halide to grains of free silver all through the gelatine layer and penetrating into the coating where the emulsion was absorbed. The gelatine layer surrounding the silver particles is then hardened with an agent such as ammonium dichromate. This strikes into the gelatine layer and the coating and provides chromic acid ions which react with the silver grains to form silver chromate and free hydrogen. The hydrogen reduces the excess of acid to chromium oxide which in the presence of chromic acid becomes chromate of chromium. This makes the gelatine water-soluble and creates jackets of hardened gelatine around the grains of silver, as well as hardening the immediately underlying polyvinyl alcohol. Thereby the grease-receptive gelatine portions are solidly anchored in the relatively softer water-receptive gelatine portions of the printing plate. Invented by William C. Toland and Ellis Bassist, Brookline, Mass. Assigned to William C. Toland, trustee, Brookline, Mass. Continuation of application Serial No. 315,412, January 24, 1940. This application March 27, 1942. 7 claims.

Printing Inks and Related Chemicals:

2,312,346. PROCESS FOR SIMULTANEOUSLY FAST DYING patterned finishing effects, such as are obtained



To PREPRINT means to check and to correct plate and form faults and errors when it can be done most economically and efficiently.

It is obvious that the checking and correction of forms and plates AFTER they are on expensive production presses is extremely costly.

As it is impossible to determine in advance accurately what this time will be, this indefinite factor on estimated jobs can be the difference between loss and profit.

PREPRINTING is a sure cure for this---and you can prove it for yourself---by degrees. You can see it cut down your makeready time, increase the impression output of your presses ---and add to your profits.

PREPRINTING pays as sure as 2 and 2 equals 4. In PREPRINTING, you add man-hours to LOW-COST machine hours, instead of adding a greater number of man-hours to HIGH-COST machine hours.

If you are interested in more economical production, seriously consider PREPRINTING for your own plant.

VANDERCOOK

PROOF PRESSES - BLOCK LEVELLERS - HACKER GAUGES

VANDERCOOK & SONS, Main Office and Plant, 900 N. Kilpatrick Ave., Chicago, Ill.
Eastern Branch: 216 East 45th St., New York - Canada: Sears Limited, Toronto

REDUCE FIRE HAZARDS THRUOUT YOUR PLANT
WITH
JUSTRITE SAFETY CANS

● Approved, Inspected and Individually Numbered and Labeled by Underwriter's Laboratories, Inc. Approved by Associated Factory Mutual Fire Insurance Companies.

The only safe, sensible way to handle and store all types of flammable liquids. These approvals, on your Justrite Safety Cans indicate best quality and highest safety factors. Look for them!

Justrite Safety Cans come in 7 sizes—1 pint to 5 gallons.

For details and prices on these and other Justrite Safety Products, ask your jobber or write

JUSTRITE MANUFACTURING COMPANY
2094 N. Southport Ave., Chicago, Ill.

USE
Mercury Rollers and Blankets
●
Built For
SUPERIOR PERFORMANCE
●
RAPID ROLLER Company
Federal at 26th St.
Chicago, Ill.

SAFETY·RELIABILITY·ECONOMY
CLINE
PRESS DRIVES and CONTROL
Reels, Tensions and Pasters . . .
CLINE SYSTEM
CLINE ELEC. MFG. CO.
Chicago: 211 West Wacker Drive
New York: 220 East 42nd Street
San Francisco: 1st Nat'l Bank Bldg.

100% AUTOMATIC SLUG SAWING
Odd-measure slugs sawed to any measure as ejected from line-casting machine. Fast—accurate—economical. Write for folder and prices.
MOHR LINO-SAW CO.
128 N. Union St. Chicago
MOHR SAW

A. P. S.
GUMMED PACKING
CORK BLANKETS
CREEPERS
POURING SHEETS
ROUTER BITS
TAILBOARDS
ALWAYS BEST AT
AMERICAN PUBLISHERS SUPPLY
17 Stewart Street Lynn, Mass.

35 COLORS, BLACKS, WHITES, COMPOUNDS
ipi Everyday INKS
ARE SPECIALLY DESIGNED FOR AUTOMATIC PRESSES
INTERNATIONAL PRINTING INK
BRANCHES IN PRINCIPAL CITIES

TINGUE
PRINTING PRESS BLANKETS
TINGUE, BROWN & CO.
114-120 East 23rd St. NEW YORK, N. Y.
1227 Wabash Ave. CHICAGO, ILL.
723 E. Washington Blvd. LOS ANGELES, CAL.

RICHARDS Saws SINCE 1910
"MULTIFORM"
"ELECTROMATIC"
"DOMORE" "CLIPPER"
SAWS—ROUTERS—DIES
J. A. RICHARDS CO., Kalamazoo, Mich.

by the local action of parchmentizing or shrinking swelling agents on textile fabrics containing cellulose. Invention is based on the discovery that it is possible to dissolve insoluble indigoid and anthraquinoid vat dyestuffs and azo dyestuffs of the naphthol series in salt-like parchmentizing swelling agents such as concentrated solutions of zinc chloride. As described in patent 2,112,895, these swelling agents may be worked into stable printing pastes, and now the dyestuffs may also be dissolved or colloidally distributed in these printing pastes. Accordingly, there may be produced in one operation fast dyed pattern effects which at the same time may be transparent or damask effect. Invented by Fritz Lorenz and Ernst Weiss, Wattwil, Switzerland. Assigned to Heberlein Patent Corp., New York, N. Y. Application June 22, 1939. 3 claims.

2,313,076. METHOD OF PRODUCING A COLOR CONCENTRATE for coloring plastic and coating compositions such as lacquers, paints, varnishes, inks, etc. by uniformly dispersing therein brilliant opaque organic coloring materials which are very fast to light, air and washing. Invention is especially useful in preparing a color concentrate for lacquer compositions used in textile printing. Method comprises suspending a water insoluble cellulose ether or ester in the form of permeable particles in water, treating the suspended particles with a water-soluble leuco color base in alkali solution so that the color base is absorbed upon and within the particles, and then adding a developing agent including a water soluble acid which neutralizes the alkali and converts the color base to insoluble material of desired color on and within the particles of the cellulose derivative. Invented by Gustave Klinkenstein, Maplewood, Frederic Dannerth, East Orange, and Conrad Frey, Nutley, N. J. Assigned to Maas & Waldstein Co., Newark, N. J. Application December 3, 1938. 2 claims.

2,313,328. PRINTING INK which will stay open on the press even under high humidity conditions, but which can be treated with steam or a water spray after printing to separate some of the binder from the solvent at the surface of the printed film to prevent offset. The ink comprises a pigment, and a varnish of the following composition: 50 parts (by weight) of a liquid polyglycol such as diethylene glycol as a solvent; 40 parts of a resin such as rosin modified by an alpha beta unsaturated organic polybasic acid, e.g. maleic or fumaric acid, or a terpene hydrocarbon of the formula $C_{10}H_{16}$ modified by such an acid; 10 parts of an alkyd resin which is soluble in ethyl alcohol and in the polyglycol, this resin being a condensation product of a polybasic acid such as maleic, and a polyhydric alcohol modified with castor oil. The printed ink film is hard, highly smudge-resistant and is said to have improved adhesion. Invented by Donald R. Erickson and Paul J. Thoma, Kalamazoo, Mich. Assigned to Michigan Research Labs., Inc., Kalamazoo, Mich. Application June 4, 1942. 4 claims.

2,313,592. PROCESS FOR MAKING A SAFETY PAPER OR A SAFETY INK for use in bank checks, bonds, etc., which will discolor or develop warning indicia such as the word "void" when chemical ink eradicators are applied to

thereto. Invention employs a group of color-forming compounds comprising 3,3'disubstituted benzidines or salts thereof, e.g. 3,3' dichlorobenzidine which are incorporated in the paper or in special colorless inks for printing the warning indicia on the paper. These compounds react with ink eradicators, as described. The colored reaction products cannot be removed by bleaching with sodium bisulphite or by volatilization. A suitable ink for printing colorless warning indicia on the paper contains 2 parts by weight of a 5% solution of ethyl cellulose in dimethylphthalate and 1 part of dichlorobenzidine. The ink vehicle used can be varied and is no part of the invention. Invented by Burgess W. Smith, Rochester, N. Y. Assigned to The Todd Co., Inc., Rochester, N. Y. Application September 26, 1940. 12 claims.

2,314,196. METHOD OF STABILIZING A DIAZO COMPOSITION containing a diazo derivative of 4-chlor-2-nitraniline, such as Fast Red 3 G Salts, so that they may be stored at ordinary temperatures and will not deteriorate when formed into aqueous printing pastes and allowed to stand at room temperatures. This is accomplished by adding about 10% of a sulfanic acid or a salt thereof to the diazo composition, for example by grinding the two materials together in dry form. In preparing printing pastes from the dry diazo compositions, they are slurried with water and then mixed with a thickening agent and/or other ingredients such as gum tragacanth, dextrin, etc. Invented by Earl W. Clark, Buffalo, N. Y. Assigned to Allied Chemical & Dye Corp., New York, N. Y. Application July 27, 1940. 11 claims.

2,314,307. QUICK SETTING PRINTING INK which contains as a binder a thermoplastic resin which is solid at atmospheric temperature and which becomes molten on warming. The thermoplastic resin is preferably one prepared by the interaction of phenol and its homologous with sulfur monochloride. As a coloring agent for the ink almost any pigment can be used as well as laked dyestuff or pigment dyestuffs. Other modifying agents such as wool fat, waxes, plasticizing agents, etc., may be added. When on a press having a heated ink fountain, distributing rollers and type bed, the ink is fluid but upon printing it sets almost instantaneously without offset. Therefore printing speed is said to be limited only by the speed of the press. Invented by Carleton Ellis, Montclair, N. J. Assigned to Ellis Labs., Inc., Corporation of New Jersey. Application May 21, 1940. 3 claims.

2,314,652. NEW AZO PIGMENTS AND DYES, prepared by mixing an ice color coupling component and the reaction product of an ice color diazo component with an alkylol or alkoxyalkylol derivative of guanylurea. Stable alkaline printing pastes can be prepared from these mixtures by dissolving them in a solvent such as acetone, alcohol, water, etc., together with other ingredients such as alkalis, organic bases, impregnating agents, thickeners, etc. Cotton goods can be printed with such a paste by means of a copper roll. The print is then dried and subsequently the desired color is developed by steaming in the presence of acetic acid or other volatile acid vapors. Invented by Paul P. McClellan, Old Greenwich, and Walter P. Ericks, Cos Cob, Conn. Assigned to American Cyanamid Co., New York, N. Y. Application August 30, 1941. 6 claims

---

Printing Presses and Equipment:

2,311,667. TWO-REVOLUTION CYLINDER AND BED PRESS, having a novel cylindrical printing form, so constructed and arranged with respect to the press cylinder that the press will be adapted for two impression printing in a single cycle. Arrangement is such that the bed may be rendered inoperative, whereby the press can be converted into a single rotary press for one impression printing. Invention also provides a driving mechanism for the bed of the press which imparts to it a uniform movement during the impression stroke and a harmonic movement on the reverse and return stroke. Invented by William M. Kelly, Westfield, N. J. Unassigned. Application January 27, 1940. 13 claims.

2,312,037. ONE CYLINDER TWO-COLOR PRINTING PRESS wherein a usual gripper mechanism retains a sheet of paper for a minimum of two revolutions on the single pressure cylinder which is located uppermost. Means are provided for raising and lowering this cylinder for periods of 2½ revolutions in each position. In the lower position the cylinder presses its sheet of paper against each of two different color forms moving in a single frame at a speed corresponding to that of the cylinder's periphery, the form sections having their leading edges spaced a distance apart preferably equaling the circumference of the cylinder so the paper in two revolutions may contact their combined lengths. In the upper position the cylinder allows the frame bearing the two forms to be returned to its starting position. Two ink supply means move downward so their respective color rollers contact the form sections once during each period of reciprocation. Invented by William R. Hildebrand, New York, N. Y. Unassigned. Application June 27, 1941. 7 claims.

2,312,322. SCREEN TYPE PRINTING OR LITHOGRAPHING MACHINE intended primarily for printing on cylindrical surfaces such as on containers. In the present machine the printing screen moves relative to rotation of the article being printed while the squeegee remains stationary. Normally the screen is spaced away from the article a short distance and the squeegee pushes it against the article on the screen's printing stroke and allows it to spring back from the article on the non-printing return stroke. When the article being printed has projections on its circumferential surface, such as the ears on a pail, provision is made whereby the squeegee may be shifted on the screen out of the way of the projections to permit printing beyond the projections. Invented by Elof E. Dalton, Berwyn, Ill. Assigned to American Can Co., New York, N. Y. Application April 19, 1940. 5 claims.

2,312,853. PLANOGRAPHIC DAMPING ROLLER for distributing the fountain solution to a printing plate in order to maintain the non-printing areas repellent to greasy ink. The roller may be of any suitable composition such as metal or plastic. It may be of commonly employed brass and may have a fabric cover such as "molleton" but this is not essential. To whatever type of base roller is used—to bare metal or to a fabric,—a coating is applied of water-receptive, water-insoluble polyvinyl alcohol. This coating carries the fountain solution and is said to give better distribution with less scumming and grease transfer and therefore with less need for cleaning. Invented by William C. Toland and Ellis Bassist, Brookline, Mass. Assigned to William C. Toland, trustee, Brookline, Mass. Application February 26, 1940. 6 claims.

2,313,830. DOCTOR BLADE for a rotogravure printing cylinder which functions for at least 700,000 or 800,000 revolutions of the cylinder before the blade has to be removed and resharpened, and at the same time has a reduced tendency to scratch the cylinder. The blade consists of two laminated thin metal strips having a thin layer of lubricating compound such as graphite compressed between the two strips which serve to lubricate the blade as it bears against the rotating printing cylinder of the press. The lubricant has a binder therein such as bitumen so that it may be slightly heated and then compressed between the strips to hold them together. The forward portions of the metal strips are ground to a sharp wiping edge and are also chromium plated to provide a hardened surface. Invented by Axel E. Lundbye, Springfield, Ohio. Assigned to The Crowell-Collier Publishing Co., Springfield, Ohio. Application June 2, 1942. 8 claims.

2,314,351. MECHANISM FOR INKING THE PLATE of a lithographic press which, in conjunction with the damping mechanism of the press, is said to enable the production of printing having improved uniformity of inking and intensity of color. Feature of the invention is an arrangement of inking rollers whereby there is provided a greater number of paths of ink flow from the upper portions of the inker to the rollers supplying ink to the form rollers and correspondingly, a greater number of paths of water flow from the form rollers into the upper parts of the inker. Preferably, the arrangement is such that the water picked up by the first form rollers to roll over the plate may travel directly into the upper parts of the inker without first coming in contact with the rollers which supply ink to the last form rollers to roll over the plate. Invented by Charles W. Harrold, University Heights, Ohio. Assigned to Harris-Seybold-Potter Co., Cleveland, Ohio. Application February 6, 1940. 16 claims.

For Patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, address INVENTION, INC., Munsey Bldg., Washington, D. C.

Advertisers' Index — April 1943

American Publishers Supply....47
American Roller Co.....42
Atlantic Zinc Works, The.....31
Booth, The E. A. Rubber Co....37
Burgess Cellulose Co.....38
Certified Dry Mat Corp.....33
Challenge Machinery Co.....39
Champion Paper & Fibre Co., The..... 4
Cline Electric Mfg. Co.....47
Cromwell Paper Co.....45
Duplex Printing Press Co., The.27
Eastern Newspaper Supply.....43
Edes Mfg. Co., The.....40
Goodyear Tire & Rubber Co., The..... 3
Goss Printing Press Co..... 6
Hammond Machinery Builders, Inc.....41
Harris-Seybold-Potter Co .....Inside front cover
Hoe, R. & Co..... 8
Imperial Type Metal Co.....35
International Printing Ink Corp.47
Intertype Corporation..Outside back cover
Justrite Mfg. Co.....47
Kelly, E. J., Co.....36
Lanston Monotype Machine Co..... 9
Linotype Parts Co.....39
Ludlow Typograph Co..... 1
Matrix Contrast Corp.....10
Mergenthaler Linotype Co.....23
Miller Printing Machinery Co.. 7
Milwaukee Saw-Trimmer Corp..38
Mohr Lino-Saw Co.....47
Morrill, George H. Co.....29
Rapid Roller Co.....47
Richards, J. A., Co.....47
Rouse, H. B., & Co.....44
Royle, John, & Sons.....33
Sinclair & Valentine Co.....45
SKF Industries, Inc..... 2
Teletypesetter Corp.....34
Tingue, Brown & Co.....47
Vandercook & Sons.....46
Vulcan Proofing Co.....35
Wetter Numbering Machine Co.37
Wood Flong Corp.....43
Wood Newspaper Machinery Corp.....25

Handbook for Pressmen

BY FRED W. HOCH

This is a practical technical discussion of all platen and cylinder press operations in the commercial pressroom. The language used by the author is *your* language—the text is written simply and pertains to the operations actually performed in the pressroom.

To give an idea about the contents of the book we quote some of the chapter titles:

Methods of Line-up	Overcoming Offset
Presswork	Workups—Cause and Remedy
Makeready, Platen Presses	Slurs—Cause and Remedy
Makeready, Cylinder Presses	Repairing Plate Batters
Overlays and Makeready	Ink
Close Register	Color Mixing and Matching
Setting the Rollers	Metallic Inks

Some of the more unusual operations to many pressrooms are covered by the author in the following chapters:

Printing Water Color Jobs	Details of Embossing
Two Colors on One-Color Press	Hot-Plate Embossing and Paneling
Patent Base Speeds Imprint Jobs	Gum Label and Embossed Seal Printing
Printing on Cellophane	Die-Cutting Methods
Printing Facsimile Letters	The Stencil Screen Process

And much other valuable pressroom information. This book is bound in brown cloth, contains 236 pages, 6 in. by 9½ in., is well illustrated with line diagrams and a number of charts.

Price $3 per copy

Because of the small handling margin please enclose cash with order.

Printing Equipment *Engineer*

1276 West Third St. Cleveland, Ohio

THE MOST IMPORTANT RESEARCH WORK TO HAVE BEEN PUBLISHED FOR THE GRAPHIC ARTS IN MANY YEARS.

Reading

As a Visual Task

By

Matthew Luckiesh, D.Sc., and Frank Moss, E.E.

For printers, publishers, designers, typographers and layout men!

IF you haven't thought of it in that way before now, it is your prime responsibility to assist in the nation's eyesight conservation. How you can assist in this vitally important phase of your profession will become apparent to you after reading this book.

Type faces, length of line, leading between lines, paper, ink, printing method, and lighting are some of the factors involved in eyesight conservation.

The text of the book is such that the language of the research scientist and the technician so far as possible have been brought together through the use of printers' language.

The book consists of 428 pages, size 5½ in. by 8⅝ in. Bound in maroon cloth, gold stamping on backbone. Illustrated.

Price $5 per Copy

Please enclose cash with order because of limited handling margin

PRINTING EQUIPMENT ENGINEER

1276 West Third Street Cleveland, Ohio

MANUAL *of* STEREOTYPING

by JOSEPH D. GOGGIN

In this book, the author discusses the three primary factors in stereotyping — equipment, materials and manipulation. Since the stereotyping process largely is an Art and the results to be obtained in good plate-making are dependent upon the coordination of equipment, materials and manipulation, a reliable guide for securing this coordination is essential.

In preparing this book, the author has drawn upon his extensive practical experience and study in the Art. The all-important preparation of the form from which the mold is to be made and the molding and casting procedures are thoroughly discussed from the standpoint of the peculiar requirements of the process.

A Glossary and Encyclopedia gives definitions of terms used in the stereotype process. Bound in black cloth, gold stamped, 256 pages, size 5½ in. by 8 in. Price, $5, cash with order. Handling margin makes it necessary that cash accompany all orders for books.

PRINTING EQUIPMENT Engineer

1276 WEST THIRD STREET, CLEVELAND, OHIO

Announcing

THE 7TH REVISED EDITION

THE BOOK

The Story of Printing and Bookmaking

by

Douglas C. McMurtrie

Here is the whole fascinating history of printing told by one of America's outstanding typographers and book designers. Long regarded as the standard work on the background of printing, *The Book* belongs on the reference shelf of every printer. The text is illustrated by 150 reproductions of the work of old and modern printers, engravers and bookbinders. A 32-page bibliography of the most significant titles on printing and bookmaking is included.

Bound in blue buckram, gold stamped, 676 pages, 7 in. by 9¾ in.

Price $5 per Copy

Because of the limited handling margin, please send cash with order

PRINTING EQUIPMENT ENGINEER

1276 West Third Street Cleveland, Ohio

FREEDOM requires a FREE PRESS

DEMOCRACY is only human. Sometimes it is attracted briefly to greener-looking spots to the right or left. To promising isms...To easier Utopias visioned alluringly by good hearts whose ambition is to plan for men as a mother plans for her children.

But in this land of the free, certain men and women, because of an inner urge, dedicate themselves to serving the people by publishing newspapers and magazines. They represent and think ahead for every phase of America's economy. These publishers are in fact a vocal cross-section of our democracy.

This cross-section of democracy sticks pins into too roseate dreams. It sharpens the thinking of people on all sorts of questions, by exposing the pros and cons.

Dictator minds can't *take* this freedom to sting their pet ideas. Their impulse is to *liquidate* it—sometimes by a procedure not immediately apparent.

In America our courageous and vocal free press has been a principal factor in keeping democracy on the path to ever increasing freedoms. It has helped more than any other method thus far discovered by history.

In these times it is more necessary than ever that the people be kept daily mindful of the importance to them of a free press, and advised of any oblique threats to it. Only thus can the people preserve *this* freedom, as a continuing guide to all other freedoms. TEXT IN WEISS

* INTERTYPE *

Tenth of a series of messages on the Freedom of the Press by INTERTYPE, *Brooklyn*